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THE AMERICAN FARMER.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." Virg.

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VOL. IX.—No. 1.]

JANUARY, 1880.

[NEW SERIES.]

MARYLAND.

Her Capabilities and Advantages.

Messrs. Editors American Farmer:

In looking over an old book written more than a hundred years ago, my eye fell upon the following description of Holland—a State but little larger than Maryland—marked by me when I read the article many years ago:

"Holland," the writer says, "is unquestionably the wealthiest, the busiest, the most populous State upon earth. Not a hand is unemployed, not a foot of ground unoccupied; and for a long time I ascribed their extraordinary prosperity to an industry and ingenuity peculiar to them alone. But on further observation I discovered the true source as well of their industry as of their opulence, and am persuaded that any nation bordering on the ocean might derive the like prosperity from the same spring."

The writer first notices the *industry* of the people as the foundation of their opulence. These habits of industry prompted the Hollanders to avail of their natural advantages. Holland—but one-fourth larger than Maryland—is a country almost entirely reclaimed from the sea. Another writer describes it as being by nature "a wide morass, in which oozy islands and savage forests were interspersed among lagoons and shallows; a district lying partly below the level of the ocean, at its high tides subject to constant overflow from the rivers, and to frequent and terrible inundations by sea." Could there be a more forbidding situation upon which to lay the foundation of empire and prosperity? Yet we find these perfect beavers of industry catching the elements of wind and tide, chaining them to their cars, converting them into agents for subjection and channels of commerce. The windmills and canals of their day have been only equalled and surpassed by the railroad and telegraph of ours, with this difference: they were content to remain and improve the land they reclaimed and subdued; while we skim over and cream a richer, more beautiful, diversified and highly-favored country than fell

to the lot of the patient, toiling, rich and prosperous Hollanders.

After rejecting the grant of Avelon (Newfoundland) on account of its cold, barren and inhospitable climate, Lord Baltimore turned his course South and sailed for Virginia. Being unwilling to subscribe to the oath of allegiance and fidelity tendered him by that colony, he left its borders and explored the Chesapeake. "He was pleased," says Onderdonk, "with the rivers, creeks and inlets and the noble and beautiful forests which skirted its eastern and western shores. He felt satisfied that he had found a territory possessing all the elements for future prosperity—an asylum for the oppressed and an abode of peace, happiness and plenty. He found a large bay jutting two hundred miles or more inland from the sea, intersected with noble rivers and inlets, a soil rich and easily cultivated, covered with timber for fuel and for buildings." Returning to England he had no difficulty in obtaining from Charles I. a grant with ample powers, limits and dimensions of the territory with which he had become so much enamored. But before its execution he died, and its inheritance fell to his son Cecilius, who, with the charter confirmed and executed, in the autumn of 1633 sent out in the Ark and the Dove his first colony of two hundred emigrants, under the leadership of his brother Leonard as their first governor. They arrived at St. Mary's on the 24th of March, 1634. Their first act was to erect the cross in token of gratitude to Almighty God for their preservation across the great deep, and a pledge of peace, mercy and justice with which they hoped to be guided in planting their new settlement in the wilderness inhabited by savages and in a country to them unknown. These lofty principles of peace, justice and mercy soon won the confidence of the savages; and to Maryland belongs the proud distinction of conquering the savage Indian—not by fraud and violence, but by justice and mercy. Thus was laid the foundation of a colony rich in historic reminiscences, rich in soil and productions, rich in noble men and virtuous women, and rich in a name hitherto untarnished by crime and fraud or deceit.

Little did Lord Baltimore know, when he explored the Chesapeake and found it and its shores so rich, beautiful and attractive, of the extent of the wealth and riches which lined the bottoms of the coves and inlets which first attracted his practical eye, and of its ability and adaptability for all time to keep up and increase the productions of the rich soil which he found on either side of the bay; or of the variety and capacity of the central belt of territory from the Potomac on the south to Mason & Dixon's line on the north; or of the heavy and almost exhaustless wheat lands of Western Maryland; or of the black diamonds which underlie the Alleghanies at the western extremity of the colony. Still less did he imagine that a second Amsterdam, bearing his own name, would rise up at the head of the beautiful bay, with docks and piers and steamships seeking at her wharves not only the surplus productions of all Maryland, but also levying tribute upon the productions of new and boundless territory hundreds of miles west of the westernmost boundary of the colony.

Nearly two hundred and fifty years have passed since the benignant and merciful eyes of Lord Baltimore first rested upon these shores; generation after generation have found food, raiment and shelter, comfort, wealth and happiness from her generous productions. The land still yields her increase—in many instances ten, twenty and hundred-fold greater than before. New sources of wealth have been developed, with increasing power for further development. Her climate and soil, her beautiful bays and rivers, and her hills and valleys, as attractive as when his lordship's eye was first captivated by its beauty and loveliness; and yet with all these advantages outside of her commercial mart, Maryland has attracted to her soil a population only of about 25 to the square mile, or, including the city, but 80, to the 300 per square mile on the oozy, slimy morass upon which the patient, delving Hollander threw up his mound and first pitched his tent. Holland has 13,890 square miles; Maryland has 11,124.

The future historian, in contrasting these two countries, now connected by close ties of commercial interest, will ask why is it that Maryland, with all her superior advantages, has grown so slowly? Why her productions so scant, her soil unimproved, her resources undeveloped and unused? It cannot be for want of skill or want of intelligence. In the fields of commerce, of battle, or of politics, her sons have no superiors; but in agriculture she languishes and declines. The land in many parts lays idle, worn and unproductive. Something is wrong—something is wanting to remedy and correct this unnatural condition of so highly favored a State. Is it statesmanship, or is it industry, or is it both? I am strongly inclined to think that here is the true cause of the evil: want of interest and want of industry. We have been led off and captivated by commerce, by manufactures and by politics. The same patient, persevering industry which made Holland one of the richest and most wealthy countries in the old world, where, as the writer first quoted says, "not a hand is idle, not a foot of land uncultivated,"

would long since have made Maryland, with her greatly superior advantages, the Holland of the new world.

An instance or two in proof: About thirty-five years ago, in answer to enquiries for a reliable nursery, I was directed to a German gardener and nurseryman in Washington, who in early life had come to this country as servant to one of the foreign ministers. I found his garden on the northwest outskirts of the city, near what was formerly known as the slushes—a white, livery, sticky soil, of all others I thought the most unfriendly for vegetables and small fruit; yet by trenching and double-trenching, and with a liberal use of manures, this plodding Dutchman had brought his garden to the highest degree of production; such celery, asparagus and rhubarb-
pie plant I had never before seen; and his strawberries I afterwards learned were the very finest in the market.

Another instance: By accident several years ago I got hold of a gardener, whom I soon found was from Holland, and a man of great skill and taste in planting, trimming and landscape gardening. He drove his spade deeper than I had been accustomed to see, and where I had deemed one load of manure sufficient, he put three.

I subsequently rented him a house and garden, the latter running down to and across a small branch, with about two-thirds of the garden flat and subject to overflow. This part of the garden he laid off into squares like a checkerboard; sinking his dividing ditches about two feet below the surface, and throwing the excavated earth regularly over the intervening squares;—thus raising the ground and sinking the water, he had no further trouble with overflow. But after each freshet he found a deposit in the bottom of these open ditches, which he utilized by composting it with the manure from his pig-pen, chamber and house slops, which he carefully preserved for the compost heap.

Still another: As trustee, about twenty-five years ago, it became my duty to lease a lot of ten acres of ground just within the northeastern limits of the city of Baltimore, on elevated ground with a southwestern exposure. The land, with its surroundings, appeared to me thin. It was taken by a German at thirty (30) dollars per acre; three hundred dollars for the ten acres. He proved a punctual tenant and I did not often visit him. Upon one occasion he insisted upon my coming out to see him, and offered to come for me. Upon reaching the lot I was surprised to see the richness and luxuriance of his truck. He pointed out three celery beds of perhaps a hundred feet each, from which he told me he expected to pay his rent. Not a weed was to be seen, and everything and the whole ground looked as light and clean as if just fermented by a dose of Baker's baking powders. Seeing a large compost heap of street scrapings and night soil, I asked him how many cart-loads (horse cart) to the acre he used. His reply was one hundred.

I soon found that his manure bill cost more than his rent, and he subsequently offered 1,000 dollars per acre for the whole lot. From the above-cited instances, as also in the account we

have of the manner of cultivation and production in Holland, it is manifest that we don't understand the value of manure; not commercial fertilizers, which rob us of our cash and draw off our attention from the true source of wealth and profit—home-made manure. The late George Patterson said to me on one occasion: "It is dung that makes land rich; nothing else will." "Dig about it and dung it," is a lesson we learn from holy writ.

Since our old staple, tobacco, which was once "our meat and drink, our clothing and our money," as said the gifted McMahon, has been superseded from other fields, and we have lost our prestige in wheat, though still an important and most valuable crop, and the dairy and fruit crop have come prominently forward, with the probable introduction of the sugar-beet for the manufacture of sugar, *transportation* becomes a question of prime importance and of pressing necessity. Neither Holland, nor England, nor France, would be silent and indifferent in such an emergency. Bounties, cheap transportation, exemption from taxation, would be the encouragement held forth to all such new and untried industries.

Our State legislature is about to meet, and the Congress of the United States, upon our western border, is already in session. Can we not obtain encouragement and assistance from one or the other?

Of what use is a government that does not consider the welfare and condition of the people? Surely we have statesmen willing and able to grapple these questions, and out of them Maryland can be lifted from her present low grade of twentieth in the list of States, and placed where she once stood—fourth or fifth. Her name, her geographical position, her soil and climate, her nearness to the ocean and the great West, and her proximity to the national capital, entitle her to as high a rank in agriculture as she has in commerce, and to the first consideration at the hands of her lawmakers.

Respectfully yours, A. B. DAVIS.

Food and Philosophy of Animal Nutrition.

[Concluded from our December No.]

Messrs. Editors *American Farmer*:

I will take occasion here to correct a couple of popular errors upon the subject of food and eating: The first is that it is best to eat few and the simplest articles of food. As before observed it requires 14 different elements to build up and nourish the body, and not one of them can be dispensed with. Now, there are very few articles of food that supply all of these 14 elements, and in order to obtain them all a person must eat a very considerable variety of the ordinary articles of food. There should be eaten at least one or two articles of each class of food, viz: the carbohydrates and the albuminoids; and it would be still better to add to them fruit and vegetables of some kind.

The other error is the very common belief that a laboring man requires fat meat to keep up the

strength whilst at hard labor. The fact is, fat is composed mostly of carbon and contains neither nitrogen nor the mineral elements; in other words, it contains nothing to support either the bone or the muscle, and adds nothing to the strength of the body,—its only office being to keep up the animal heat. The consumption of very fat meat is an actual disadvantage in hot weather, as it tends to increase the heat of the body. What the laboring man needs is something to give strength to the bone and muscle; and it is the albuminous food that does this. Beef, mutton, eggs, milk, lean bacon, peas, beans, cheese, &c., belong to this class of food. Peas and beans furnish the very best diet for the laborer, for they are richer in nitrogen than any article of food accessible to the laboring man.

In the South American silver-mines, where the laborers are compelled to carry very heavy burdens on their shoulders, they are fed mostly on peas and beans in order to keep up their strength. Simple fat contains nothing to give strength to the system; whilst lean bacon is very nutritious. Lean bacon contains both albumen and fibrin, but is not so easily digested as beef or mutton.

Beef, mutton and fowls constitute the best and most nutritious animal diet in common use, being very healthy and easily digested. Young persons who have not attained to their full growth require more food than adults, and for this reason: There is very considerable and constant waste going on in the system of every person; in the adult this waste is so great that every particle of food eaten is required to repair this waste in the system.

It is true that this waste is not so great in a young person as in the adult; still it is very considerable, and an additional supply of food is required in his case to keep up his growth and at the same time repair the waste in the system.

Fruits contain but little nutritive matter, but they are exceedingly valuable as a sort of auxiliary or supplemental food. They exert a most salutary effect upon the system, being anti-bilious in their effect and tending to cleanse the blood of unhealthy humors. The eating of fruit, therefore, should be freely indulged,—provided, always, the fruit is thoroughly ripe.

The same general principles that govern human diet and its consumption are applicable to

The Food and Feeding of Animals,

as far as they go.

The food of the animal is less in variety and less complex. The main forage plants are comparatively few, but they contain generally all the elements of nutrition; and this is evident from the fact that an animal will grow and thrive upon grass alone. This is due to the fact that animals consume the whole of the plant, both grain and stalk or straw; whilst man, with his more delicate organs and taste, selects and discriminates. In the construction of the main agricultural plants nature assigns most of the mineral elements or the ash ingredients to stalks, stumps, straw and leaves of plants. These parts of plants are all consumed by the animal, whilst they are rejected by man. Still there is considerable room for discrimination in the feeding of animals. There are two kinds of animal food, viz: the fat-producing food, and that which goes to

build up the bone and muscle. The work animal requires the latter, whilst the fattening animal must be fed upon the former. The different plants differ very much in their fat-producing properties. Of our main agricultural plants wheat yields a little more than one per cent. of fat; oats about the same; peas 3 per cent; whilst corn yields 7 per cent. It is evident, therefore, that corn is far better for fattening purposes than any other of our grains. But there are other plants that yield far greater amounts of fat than corn. For instance: cotton-seed yield 34 per cent; flax-seed 34; colza 45 per cent. Now, in fattening our hogs an immense saving might be effected if we were to cultivate some of the high fat-producing plants for that purpose. Colza holds the highest place amongst this class of plants—yielding, as stated above, 45 per cent. of fat. It is very extensively cultivated in France and other European States for fattening purposes; but its cultivation has never been introduced in this country—a fact that cannot be accounted for.

Work-animals need that class of food which nourishes the bone and muscle. As examples of that class of food, I mention hay, oats, pea vines, fodder, rye, &c. Of the different kinds of grain that of the oat seems to be best adapted to the feeding of work-animals. Corn is extensively used for that purpose, but it should never be used alone, as it is too concentrated and produces too much heat in the body.

There is another important subject that comes up in connexion with that of stock-raising and feeding, and that is the making of manure; for it is in the manure that a large portion of the food fed to the animal may be recovered and returned to the soil. On this point an able writer says: "We have already asserted the opinion that no farmer can prosper in his business who fails to make the most of green crops and animal manures." And in this connexion there comes up another important question which we will be forced to consider, and that is: can we compete with the great Northwest in raising wheat? By reason of the great reductions recently made in railroad transportation, and the very unjust and unfair discriminations made by the railroads against the East, the West is now enabled to put its wheat in the Eastern markets about as cheaply as we can ours, and in consequence we are brought in direct competition with them on equal terms. New York and Pennsylvania were forced to confront this issue, and they found out that they could not, and, gracefully yielding to the inevitable, they abandoned the cultivation of wheat as their main staple crop, and substituted in its place the one the *dairy* business and the other that of stock-raising, and both of them have been vastly benefited by the change.

We will be compelled to follow the example of Pennsylvania to some extent at least, and resort to stock-raising as far as is practicable. And the first step that we take in that direction should be to get some of the improved breeds and raise more grass. Heretofore the opinion has been almost universal that the soils of Eastern Virginia were not suited to grass culture. This is a great error. It is true that our soils

are not as well suited to grass as those of West Virginia, but many of the grasses do flourish here, and their cultivation may be made profitable. Orchard grass, clover, timothy and German millet all do well here, and they may be supplemented by root crops, for which our soils are admirably adapted. Turnips, beets, carrots and potatoes may be raised here in any needed quantity, and their cultivation involves but little labor.

Present System of Farming must be Changed.

There is another very potent reason why we should change or modify our system of farming. Ever since the first settlement of the country we have been practicing the gutting (exhausting) system, which takes everything from the farm and returns nothing to it; and it is this system that has reduced Eastern Virginia to its present condition. The history of agriculture has established the fact that in all countries where grain is extensively raised and exported the tendency is to a constant exhaustion of the soil. On the contrary, where stock-raising is the leading industry the tendency is to enrich the soil. Our soils cannot be kept up or enriched without manure, and manure cannot be raised to any extent without stock. We cannot compete with the Northwest in raising wheat, and the cultivation of tobacco at present prices is fast working our utter ruin. It is true that prices have somewhat improved recently, but a careful view of the outlook leaves it doubtful whether its cultivation can ever be made remunerative here again. The cultivation of tobacco involves too much labor. It is too expensive. Experienced planters estimate that it costs from 6 to 7 cents per pound to make tobacco, whilst during the last two or three years the average price of tobacco in this region, where the shipping and stemming varieties are made, has not exceeded 4½ to 5 cents. The cultivation of tobacco has been very much extended during the last ten years. It is now cultivated in almost every country under the sun, and all the markets of the world are glutted with it.

Turning now to stock-raising, let us see what are the prospects in that direction. During the last ten years the consumption of beef has increased four-fold. Immense quantities are required for the home market, and its consumption is increasing daily. Within the last few years our go-ahead, enterprising people have sought out new markets for their beef. They have boldly entered the European markets, and are now supplying the dense population of Europe with a better article than their own and at prices that enable the poorest man there to give his family a little meat occasionally. This export trade in beef from America to Europe is fast revolutionizing the habits of the people there. A few years ago the poorer classes scarcely knew what animal diet was, and millions of them never tasted meat. Even the better classes of the poor scarcely had meat often than once a week, and often only once a month.

But now these starving millions of the East having once gotten a taste of the cheap food products of America, will never again be satisfied with black bread and porridge. Changes,

however, which the rapid march of events have made necessary, should be undertaken cautiously and gradually, and all ill-advised and ill-digested schemes avoided. The cultivation of wheat and tobacco cannot be safely abandoned entirely, but our present system should be modified to meet the necessities of the times. We should cease to rely upon these two crops as our only money crops, and should very materially curtail the area of the cultivation and supplement them by stock-raising.

WM. HOLMAN.

Cumberland Co., Va.

[This paper of Mr. Holman is of much value. Our correspondent, as he always does in his writings for the press, treats his subject, though of a scientific character, in a style which all can comprehend.—*Ed. A. Far.*]

On the Application of Peruvian Guano.

Messrs. Editors *American Farmer*:

In your December number, (p. 398,) Mr. Meeks, of Kent Co., after speaking of the marvellous results first obtained from the use of Peruvian guano, and the sanguine hopes excited by its use, says: "Further trials, however, dispelled the illusion, and demonstrated that stimulants are not food, and that excessive excitation of land, as of animal life, must result in subsequent and corresponding exhaustion."

Has not Mr. Meeks, in this, fallen into an error calculated to do mischief to himself and all who may be influenced by the theory which he thus enunciates? Is there any analogy between organic "animal life" and inorganic "land," or even between organic animal life and organic plant life, which should lead us to suppose that land or plant can be *stimulated* to abnormal activity or energy, to be followed by a subsequent exhaustion as an effect of the unhealthy excitement? In other words, is there any such thing as *stimulating* land as distinguished from enriching it, and which is to be avoided as the other is to be desired?

The practical phenomenon of plant life and nourishment is well enough understood.—Plants need, for their life and growth, to be supplied from some source with nitrogen, potash and phosphoric acid in such form that their organs can appropriate them,—that is (as plants can appropriate liquids only and not solids) in *soluble* form. Different kinds of plants require these three elements in different proportions, but all plants need them all in greater or less degree. A soil may be rich in one or two of these, but if the other is wholly wanting there can be no healthy *plant life*,—no life at all,—for plants, save for such as can gather for themselves, from the atmosphere, the missing element. But if all three of these are in the soil in sufficient quantities, it is only necessary to cast the seed into the soil properly prepared, and as sure as moisture, warmth and sunshine follow, just so surely will healthy, vigorous vegetation follow.

From this it is plain that if you apply to any soil a manure or fertilizer in which any one of these essential ingredients is wanting, it will

give a satisfactory result only so long as the wanting ingredients can be found in the soil itself or is supplied from some source other than the manure or fertilizer used. This is illustrated by Peruvian guano. That valuable fertilizer was exceptionally rich in nitrogen and phosphoric acid, but almost utterly destitute of potash. It was not a *complete* manure; it did not furnish all the requisites for plant growth. If it was applied to a field the soil of which had a good supply of potash, it worked like a charm; not because it *stimulated* the land, but because it furnished rich and good food to the plants, and, coöperating with the potash already there, gave them the nourishment essential to their life and healthy growth. If no other manure or fertilizer was applied, this continued till the supply of soluble potash in the soil was exhausted. After that it was useless to apply guano any longer,—it ceased to produce a crop,—not as a reaction from over-stimulation, but because the potash was missing, and the others without it were not a food on which plants could thrive. If while using it there had been a liberal use of ashes also, or Kainit or German potash—salts of high grade—or any other material which supplied the missing potash, there can be no doubt that the magical effects that followed the first use of Peruvian guano would have continued so long as guano of the *same quality* was applied; for it should be borne in mind all the time that guano from other localities, washed by continuous rains, fermented, decomposed, is a very different thing from that accumulated in the arid climate of the Chincha islands.

The expensive error—and it is a very expensive one—in all this is the idea that all manures or fertilizers are *complete* manures,—that is, that they contain all the kinds of food that plants need. Stable manures do so in a greater or less degree. Some of the artificial or chemical fertilizers do the same, but others do not, and such as are rich in any one or two of the essentials will produce results almost magical if applied to a field where those essentials are missing; but will produce no perceptible results if applied, possibly, to an adjoining field, where those essentials are already in excess.

It is easy for farmers to know the proportions of these elements which their different crops require, for these are fixed and unvarying.—Corn, wherever raised, has substantially the same constituent elements and in the same proportions. Potatoes the same, but different from corn. Grass the same, but different from corn or potatoes, and so on. With that factor fixed he can, by a few careful experiments, ascertain in which of these elements his different fields are deficient. With that knowledge, if he can obtain the fertilizer which supplies that special deficiency, he need not be careful to have it rich in other elements also. It is true economy to buy just what the crop needs and nothing else; but in order to this we need some stringent legislation. Every bag, barrel or cask of "phosphate" or "fertilizer" sold should have distinctly marked upon it an exact analysis of its contents. The purchaser should be told just what he is buying and how much of the elements are soluble. A failure to affix this information, or a fraudulent

representation in affixing it, should forfeit the article or deprive the vender of a right to collect payment. If this is done, farmers will have only their own ignorance to blame if they fail to obtain the results which they desire from the fertilizers used. HENRY STOCKBRIDGE.

Windsor Heights, Balto. Co., Dec. 8, 1879.

Cost of Fencing.

Messrs. Editors *American Farmer* :

As the expense of fencing our farms in many States has become such a grievance, it is time farmers were trying to learn and adopt the most economical and efficient mode of enclosing their farms and fields.

I presume few have fully considered or calculated the expense or cost of enclosing a 100-acre farm, and dividing it into 8 or 10 fields. Eastern Pennsylvania, as well as many other States formerly well timbered, and the vast prairies of the West, are scarce of fencing timber. The improved and enclosed lands of Pennsylvania comprise 10,000,000 acres, with an average size of lots of 10 acres, which would not be too high a calculation, if we take into consideration the roads, lanes, lawns, yards, gardens and other small divisions fenced in.

Now, to enclose 10 acres, we have on each side 660 feet, taken in square form, which takes the least fence. Counting the panels at 10 feet of post fence, it takes 264 panels to enclose it, but as every panel serves for an enclosure on each side except the roads, we will count it at half—132 panels for each 10 acres.

Now 10,000,000 acres thus divided into 10-acre fields make 1,000,000 fields, requiring 132,000,000 panels of fence. At a cost of 80 cents a panel, we have over \$100,000,000. Consider the interest on this outlay, repairs and renewal of the fences, and we have an annual tax upon the agriculture of Pennsylvania of a sum of over \$10,000,000.

From the first settlement of our country, to say nothing of the value of timber, the labor of making the rails, hauling them to their respective destination, building them into fences, keeping these fences in repair and replacing them when decayed, has been immense and unremitting. And in all coming time, as timber becomes scarce and more costly, as the distance of hauling increases by the retiring of the forest, the cost of keeping up fences must increase.

I notice that the Agricultural Bureau of Ohio has set down the cost of fences in that State at \$115,000,000, and yet that is neither a very large nor a very old State; possibly then it would not be unfair, in the absence of more reliable data, to take that sum as an average of the States; throwing in the territories, we have the enormous sum of \$4,251,200,000 as the cost of fences in the United States. The same authority estimates the annual repairs of the fences of Ohio at \$7,680,000. The aggregate for the 37 States at this average would be \$284,160,000 per annum; but how much this amount will be increased before another half century rolls round, no human sagacity can estimate.

It is obvious, then, that the most important inquiry that can be raised respecting the indus-

trial interest of our country is: how can this enormous expense and labor be lessened or dispensed with, and yet full protection to our crops be secured?

Will not the soiling system suggest itself to some of your readers as a remedy for a portion of this vast and increasing outlay? Or shall we undertake to enclose our farms with wire fences or osage hedges? Or would a sufficient fence of either kind, gotten up and kept in order, be any cheaper than a wood fence? A barbed wire fence I would not have on my farm where stock runs, and the osage-orange hedges I already have are so much trouble to keep in order, I shall plant no more of them till rail timber becomes much less plenty and much more costly than at present in Eastern Pennsylvania.

I will now give the cost of a four-rail post fence and also an Adam and Eve or worm fence sufficient to enclose and divide one hundred acres into right-angle lots of 10 acres, as this form takes the least possible amount of fence for that number of enclosures or divisions of equal size; as 12-foot rails in post fence make 11-foot panels, it will take 760 panels to enclose 100 acres; and to divide the same into 10-acre lots, 950 more, making 1,710 panels, which will cost one dollar a panel put up, making \$1,710 first cost,—this, with interest and compound interest 14 years, will be \$3,850.87. The post by this time will be rotted at the ground and new posts needed, the cost of which, with the necessary labor to repair the fence, using the old rails, will be one-half the first cost, or 50 cents a panel for 1,710 panels, will be \$855. This, added to the sum of cost up to this time, makes \$4,705.87; interest compounded another 14 years makes \$18,338.49; add another renewal of posts of same cost, \$855, makes the sum now \$11,193.59. This, with interest compounded another 14 years, makes \$24,824.66. Add another renewal of posts same cost, \$855.10, gives \$25,679.70. This, with interest compounded another 14 years, gives \$58,059.12. The third renewal of posts are now worn out and the rails no longer fit for fence, having been in use 56 years, and we have our 100-acre farm almost without any fence, which, at a fair estimate, has cost to keep fenced 56 years the enormous sum of \$58,000. Of worm fence I have made a fair and full estimate of first cost of rails, hauling, putting up and keeping in repair the same amount of fence as of the post fence, and for the same length of time, with interest and compound interest, and will give the sum total \$38,364. If any of your readers think these estimates too high for the Atlantic slope, just let them make a calculation and they will be satisfied, as I am, to try the soiling system. The saving in the expense of fencing will pay for the additional labor, and the increased amount of stock that can be kept on a farm will pay cost of additional labor. The increased amount or value of manure will more than pay the increased cost of labor. Try it.

Doe Run, Chester Co., Pa.

T. W.

P. S.—December 2d, 1879.—So little rain for the last three months corn in this county did not make a full crop; potatoes were also deficient, and waters have failed so that many farms have little or no water on them; many villages have

nine-tenths of the wells dried up, and many mills cannot run half the time, and some grind none for want of water. T. W.

[The writer of the above calculations is a well-known substantial Pennsylvania farmer.—They only confirm what the celebrated banker, Nick Biddle, in his day, said: that the annual cost of fencing in this country was sufficient to pay the interest of the national debt. Howbeit, that was not to be compared at that time to what it is at present. As remarked by our correspondent, the barbed fence is objected to where cattle range, and the Osage Orange has not engrossed public attention sufficiently to cause it to have any great success as a fence. The best plant of the hedge family we have seen and tested, on our own premises, is the *Pyracantha*, which now bids fair to equal our best anticipations.—*Ed. A. Far.*]

OUR FRENCH LETTER.

Agricultural Education in France.

Messrs. Editors American Farmer:

Of the many agricultural schools that France possesses, perhaps none merit to be signalled before that of Montpellier. It is a type of a regional college, destined to exhibit the best systems of culture for Southern France. It was founded seven years ago, and is situated one mile from Montpellier. Destined only to receive extern pupils, it was soon compelled to provide accommodation for 20 interns, and is preparing to receive 100. Its scientific organization is as complete as its practical arrangements, and the lessons of the laboratory and amphitheatre are illustrated by actual tests in the field. The museums are very complete, and the collections of insects include specimens of their attacks on various woods. The school also has specimens of the several local breeds of live stock, aiming to ameliorate these by judicious selection, while some choice foreign races are encouraged, by placing the services of valuable stallions and bulls gratuitously at the disposal of farmers. But as Montpellier is the centre of the phylloxera disease, so is it the neighborhood where the government authoritatively tests all remedies to destroy the bug. The school devotes much attention to all the ameliorated processes for rearing the silk worm, &c., and the various professors are constantly invited to deliver lectures on their special branches of agronomy to the rural populations.

One of the aims of the school is, and so far possesses a cosmopolitan interest, to discover the means for restoring prosperity to vineyards affected by the phylloxera. There are plats of vines in several stages of treatment by various presumed remedies. Analyses and the microscope play important rôles in the experiments. There are two parties in presence: one that pins its faith on insecticide preparations; the other on American stocks. Both agree that the problem to solve is not to conquer the enemy—since

he is victorious—but to arrange to live with him. Now, it is only necessary to look at results to conclude. The vines treated with insect-killing materials—annually to be employed—are sickly, stunted, and not producing one-seventh their yield of fruit; while American stocks or graftings are models of robustness and prolificacy; so much so that the peasantry come to steal the American vines from the nursery or the fields—a proof of faith to be admired only for its inconvenience. The American vine, then, resists the phylloxera. Why? Because, according to the patient investigation of M. Foëx, the roots of the French vines are soft and spongy, while those of the American rapidly become ligneous; the medullary rays are narrower, more numerous, and composed of smaller cellules; and the latter, being of a diminished diameter, the tissues are less permeable to the punctures of the insect; in other words, the root can only be attacked superficially as the wound cicatrises very rapidly, and this resistance, due to structure and function of the tissue, is preserved, even when French vines are grafted on American stocks. The American vines, then, and autumnal floodings—the Faucon plan—are the sole permanently efficacious remedies demonstrated against the Phylloxera.

Application of Fertilizers.

Recent experiments have demonstrated that where the application of superphosphates to the soil has produced no effect, the cause was to be attributed to a sufficiency of those salts already existing therein. Where 2 cwt. soil contain less than $3\frac{1}{2}$ ounces of phosphoric acid, the superphosphate will prove beneficial. When it contains 5 ounces of phosphoric acid, the addition of the salt will turn out to be useless. It follows from this that, contrary to the received opinion, it is not necessary to apply nitrates mixed with phosphates when the latter are present in the soil. M. Pagnoul continues his interesting experiments as to the solubility of phosphates by diverse agents. He conclusively proves that stable, indeed we may add barn-yard manure, will dissolve natural phosphates in the powdered state, and thus economize the expensive superphosphates.

Trenched Maize for Dairy Cows.

M. Hardon's dairy has a good reputation in Paris, since his milk is much sought after. I have tasted it lately and find it richer than that from a few notable dairies. Now in winter he feeds his stock on trench green maize, which he preserves rather originally. On the stubble of a wheat crop which had succeeded beet, he sows red clover; the next year, by June, he has taken two cuttings, averaging 5 tons to the acre; then he plows down the clover—which thus becomes an intercalary crop—and adds 40 tons of farm-yard manure; the maize is next sown in drills 18 inches wide, kept hoed and weeded. In October the maize is cut at the rate of 120 tons per ten hours, dropping into oblong masonry trenches, where it is well stamped; neither salt nor cut straw is added; when the trench is full it is covered with a movable plank, weighted with stones at the rate of $1\frac{1}{2}$ tons per square yard. In eight or ten days subsidence ensues, and the mass can be then considered as

preserved, without any fermentation, till the day it is given to the cattle green, fresh and of uniform quality.

Items.

In some of the heavy clay soils of Northern France, where from five to eight horses to a plow are necessary to turn over a furrow six inches deep, the great difficulty against the cultivation of beet was the raising and carting off of the roots. This has now been met by the employment of portable railways, where the wheels are generally broader and the flange deeper; these railways can be hired out. There are no switches, &c., and it is the driver who links new lines as required.—Sugar industry continues to be sickly; exportation is slack and home consumption diminished. The manufacturers demand a reduction of one-third in the duty, which they say would be made good by a corresponding increase under the head of consumption.

Pisciculture continues to receive much attention in France; the government extends to it every encouragement. A. M. Gallicher suggests that the character of a river, &c., be well studied before imported fish be there introduced. In 1856, at Bourges, he emptied 40,000 young eels into the local rivers; the fish thrived well, became fat, but it was noticed at the same time the other tenants, cray fish especially, diminished; a post mortem examination was held on some eels, and their stomachs were found filled with remains of the other fishes. Crustacea appears to be in great request, generally for bait—proof how they are relished.

F. C.

Paris, Dec. 4, 1879.

MARYLAND STATE GRANGE.

Seventh Annual Session—Dec. 9-11.

Upon the opening of the Grange, at which all the officers were present save the W. Flora and W. G. K., whose place was supplied by Mrs. C. Lyon Rodgers, of 153, and Bro. Merritt, of 172, the following committee on credentials was appointed: Bro. Bowen, Prince George's; Buckman, Baltimore; Sis. Lansdale, Montgomery; Bros. Clark, Howard, and Hardcastle, Talbot, who reported a quorum present and ready for business, when the Master presented his annual report as follows:

Master's Report.

BROTHERS AND SISTERS:

Another revolution of the wheel of time brings us together in the seventh annual session of the Maryland State Grange.

Our first thought is to return thanks to the Giver of all Good, for another year of abundant crops, good health, and the increasing prosperity of the agricultural interest.

In presenting this my last annual report, I desire especially to call your attention to some of the prominent points in the Declaration of Purposes of our order, which Declaration was framed at a time when our hopes ran high that the salvation of the farmer was at hand, that a new era had dawned for us after our many years of oppression. I can recall to mind now the enthusiasm with which, at the St. Louis meeting,

its first reading was received, and North and South clasped hands in a holy grasp of friendship which seemed the forerunner of our brighter future. It has occurred to me that it would be profitable for us to review our past, examine carefully our acts, and see how much we have done towards making those written words a living reality of our daily lives.

"To develop a higher and better manhood and womanhood among ourselves." Who can look back to December, 1873, when the organization started in Maryland, and for a moment question that this declaration of our order has met a hearty response in our State? The improved condition of the agriculturist is seen on every hand. There is scarcely a county in the State that has not now some internal improvement which would not have existed but for the grange; and thereby our manhood is developed, education fostered and the condition of the community through education improved.

Again we are urged to discountenance the credit system, the mortgage system, and every system tending to prodigality and bankruptcy. Could any advice have been more needed in 1873? (a period of depression following the inflated prices and extravagance engendered by the years of war through which we have passed,) and could any community have made greater progress in these most important matters than the farmers of Maryland? I feel sure that none can truthfully assert that the grange has not accomplished great good wherever its purposes have been carried out in the true spirit. My thoughts have been so happily expressed in a recent article of E. G. D. Holden, who, though not a member of our order, has so thoroughly caught the spirit of our teachings, that I cannot refrain from quoting some of his words. He says:

"Associations of mutual interests and community for mutual relief, operating through friendly channels of fraternal regard, necessarily improve the condition of every member. A better knowledge of the world is reached. Selfishness, to a large extent, is rubbed out. The heart is enlarged. Men come to know each other better. Each member feels that he no longer stands alone; he feels that others are interested in him, and he in turn is interested in them. And this interest among the Patrons, if we have read them rightly, is not by any means confined to the purchase of a bushel of wheat, a reaper or a ton of plaster, nor yet to the hearth of his neighbor's family. These things are included among the good it does; but its true greatness after all is not measured in dollars saved or dollars earned. It rises so far above that that all right-minded men have come to regard the grange as a national help. It is the backbone of the country, and has become a most important factor in the advancement of States. It is all this, because it has educated many minds that waited only for opportunities. The eagerness with which it was embraced but too plainly proved that it was long-looked-for come at last.

"Our observation has proven that this institution has not only been of great benefit to its members, but also to the States and nation. The one proposition proves the other. Anything

that benefits the people benefits the State. They are one and can never be divorced. The one is the other, and nothing can ever be taken away from itself.

"If, therefore, the grange has taught its members better business habits, better modes of buying and selling, taught them lessons in domestic and political economy, and opened up new avenues of thought and progress within its gates, it has also made the State wealthier and happier,—in that it has thereby improved the condition of the people. As we view it, the grange has accomplished all this; but even this, grand as the result may be, is not all. The grange hall and the session become not only the place where social greetings are extended, where those formerly far apart have been drawn close together, but it has also been made the school for literary and scientific research; all the time educating and all the time bettering every one privileged to sit within the shadow of its mystic fold.

"More than this, the grange has given a new dignity to the position of the farmer. It has taught him that he is no longer the one always to work, but the one to be served. He commands the situation. It has given him new ideas of his independence, and has the more impressed upon his soul the truism, that the soil is the source of all wealth, and that in the prosecution of business affairs others must depend more upon him than he upon them. The very causes which brought the grange into existence, and its rapid growth during the few years of its life, are a stronger proof than anything else can be of the necessity for its organization. It has taken a firm hold upon the affections of the people. It benefits them and thus benefits all. Narrow, indeed, and ill-educated, must be the mind and heart that do not extend to it a hearty hand and wish it God speed and good prosperity in its glorious mission. We do not believe that it will take any step backward. We do believe that it will hold to its steady dignified way, and become every year more a power for good in all our broad land. All, therefore, who love the State, whose material interests the grange in every way advances, though not permitted to become members, should extend to the Patrons their warmest sympathy. All who love the nation should cheerfully aid all those influences which make a nation great.

The grange, as we view it, is one of the mightiest of these; and this it will continue,—what we as an outsider believe it now to be,—an institution whose aims are all for 'good, for God, our Country and Truth.'

Could a stronger endorsement come from one without our gates? I trust that he has not placed us on a higher plane than we deserve; but, if he has, let us promise ourselves before leaving this hall that we will go home determined to raise our granges to the highest possible standard.

The fifteenth session of the National Grange, held in Canandaigua, New York, commencing November 19th and holding for ten days, was of unusual and significant interest to not only its own members but to the entire order. Thirty States were represented by delegates—from the

pine-clad forests of Oregon, the orange groves of Florida, from Maine and Texas,—each bringing reports of the condition of the order in their State. Numbers were not so great, but the improper material had been generally weeded out, and all was working on a more sure foundation than in the days of our great numerical prosperity.

As a body the National Grange is well worth studying; a finer set of men and women could hardly be found; faces showing thought and character that had been moulded in many a trying school. To those who had watched its progress, as your delegates had been permitted to do, it was interesting to trace from year to year the gradual uprising of a great people, as the farmers are or certainly should be. The growth has been gradual, but sure,—a freedom of thought and sentiment perceptible at this last meeting, which some years ago would not have been ventured upon by any member, if allowed by the body. Now all were eager and glad to hear brave words spoken by brave men, who felt that the time had at last arrived when farmers as a class must be heard by legislative bodies in defence of their homes and property,—members from North, South, East and West announcing their determination to throw aside partisan politics, and cast their ballots for those who would advance, not retard, our progress. It was to me a hopeful sign of our future, and the faith that our downward course would be arrested grew strong within my heart, feeling that these men echoed the sentiment of their fellow Patrons over this broad Union, of which the farmers form so large a part.

The meeting was very harmonious, and will, I hope, add strength to the order. I expect to lay before you at this session printed reports of the Committees on Transportation, Education, Co-operation, and the State of American Agriculture. The discussion on this last report occupied parts of two days, and was extremely interesting and profitable.

The members were unanimous in the opinion that the head of the Agricultural Department should be a cabinet officer, the better to watch our interests, which underlie every other industry, and only one truly interested in agriculture knows the needs of that class.

The appropriations for the agricultural department are too small to do much real good. It is surprising to me that our country should be so dead to its own interests, nurturing so carelessly a great industry, which is the real pulse of the nation,—its throbs denoting the condition of the whole body, whether in prosperity or adversity.

Only a single constitutional amendment will be presented for your action.

We elected officers for the ensuing term, and feel that we have in brother J. J. Woodman, of Michigan, a worthy Master, faithful and true, who will work only for the best interest of our order.

For details of the condition of the order in our State, you are referred to the reports of our Worthy Secretary and Worthy Treasurer. I regret that it is not more encouraging. Like other States, we are greatly in need of a more efficient lecture system. The Worthy Master of

the National Grange called the attention of the members thereto in the following words: "The attention of the National Grange is expressly directed to the fact that competent, zealous lecturers are needed now more than ever before. The cry from all quarters comes up to the masters and officers, *send us lecturers*. More than half of the entire correspondence pertains to the wants of efficient, earnest members to go out as missionaries and labor in the good cause. Political mountebanks do not seem to be required; they have done more harm than good, and our members know it.

Those only need apply who are willing to be dedicated to unceasing toil for the good of our order, our country and mankind. To-day hundreds of reporting or thousands of dormant granges are still anxious to listen to the voice of fraternal encouragement; are still thirsting for social and intellectual refreshment; are still hungering for tidings from afar. What shall be done?

Although our grange press has never been so ably or wisely edited as at the present time; although our grange newspapers never labored so earnestly as now, yet the field is only cultivated in patches, and the weeds of undisturbed ignorance and the nettles of baseless suspicion grow altogether too rank and cover too much ground. What shall be done?"

This being referred to the Committee on Good of the Order, in their report the attention of the different State Granges was particularly called to this great need, and I earnestly hope that you may devise some method to obtain a thorough lecture system in this State. Its necessity has long been felt. I firmly believe that good lecturers visiting all parts of the State would awaken an interest which has been slumbering, revive our dormant or discouraged subordinate granges, and, by increasing our numbers, add largely to our influence. I feel convinced that all that is needed to spread our order fully through the country is for the agriculturists to become fully acquainted with our aims and objects.

Your especial attention is called to the prosperity of the business arm of the order, as shown by the report of the Executive Committee on the Maryland Grange Agency. I most cordially support their recommendation to return to the subordinate granges contributing the same in 1876 the safety fund, amounting to \$1,646,—this fund having done its work, and we having no power to use it for any other purpose. The incoming administration having at this time nearly three times this amount with which to continue the business, I am fully convinced it would be a wise plan in the future to make the compensation of most of the employees contingent upon the net profits of the business.

The rapid increase of the grain trade of Baltimore city the past two years has demonstrated beyond question the absolute necessity of more elevators for the accommodation of that trade, as it would be impossible to handle with despatch, at reasonable expense, the immense quantities of grain received and shipped at this market without the aid of these modern improvements.

If the action taken by the Maryland State Grange two years ago, petitioning the State Legislature to authorize the building of a grain elevator, had been carried out, it would have afforded great relief to that large class of our people engaged in the production of cereals. Though our Maryland grain is of superior quality, and should command better prices than Western grain, it often brings less than the latter for lack of elevator accommodations. This is an injustice to the producer of a staple crop in a home market, which it is the duty of the State to correct, and it will be corrected if farmers are true to themselves, and insist upon being protected in their just rights.

It is not to be expected that the present elevators in Baltimore—built by railroad companies for the accommodation of their own trade, which is chiefly from the great West—should provide for the wants of Maryland farmers, when they interfere with the business of their roads. We make no such demand upon these corporations, but we do claim that it is the duty of the State to protect us in our just rights, that as farmers we may avail ourselves of the benefits of a market which we have been heavily taxed to create and establish. We do not ask the State to appropriate money from its treasury to build a grain elevator for our accommodation, but we think we have the right to invoke her aid to enable us to do this by taxing ourselves. The growers of grain comprise too large and respectable a body of taxpayers throughout the State to be denied their just and coequal rights, as compared with others. They are entitled to a like fostering care and protection as was granted to the planter, enabling him to build warehouses for the storage of his tobacco.

It does not become our merchants, manufacturers, or corporations, who have received so large a share of State aid, to make objections to anything being done in behalf of the farmer.

While agriculture is the least remunerative of our industries, it should be borne in mind that to its bountiful products is due the returning prosperity of every other industry. Sound policy dictates that the source of all this prosperity should have the fostering care and protection of a wise and just government, rather than the neglect which has been bestowed upon it. The State cannot afford, neither can other industries which are dependent upon our products, afford to let agriculture languish and die. Therefore we say it will not do to set up the specious plea that was urged, and I regret to say was sustained by the last House of Delegates, that it was unconstitutional to permit the farmers of this State to tax themselves to build an elevator for the accommodation of Maryland grain. It is to be hoped that the tillers of the soil of this good old Commonwealth have not so degenerated in manhood or intelligence as to be put off by any such evasive and paltry plea as this. If it be unconstitutional to do this, it will be equally so to do many things that have been done, and may be again attempted. Composed as this body is of intelligent farmers from different sections of the State, I submit to your judgment to devise the proper action to be taken in reference to this important matter.

In nearly every report I have made to you I have especially called your attention to the subject of taxation and the system of tobacco inspection in our State. The first of these taxations is one of vital importance to every farmer in the State, and one upon which you should make yourselves heard with no uncertain sound. All property (real, personal and mixed) should bear its proper and just proportion for the support of government. In my report of 1877 I presented my views upon this question in full, especially looking to the taxation of mortgages. I am only strengthened as time rolls on in my convictions upon this question, and recommend that you appoint a committee on taxation to prepare a memorial to the next General Assembly, praying for relief.

On the second, tobacco inspection, to the grange certainly belongs much credit for the agitation given this subject. Commencing with our first session in 1874, we have, year by year, kept it before the public. I believe we have already accomplished much good, but the work has only begun, and we must continue in our purpose till the grand result wished for is fully attained. In my last annual report, page 3 printed proceedings, I stated fully my views upon this subject. Seeing now no reason to change them, I would recommend the appointment of the usual committee to give the subject attention.

With this meeting the term of your officers expires. How well we have attended to the duties entrusted to us we leave others to judge. The most perfect harmony has existed between us. We came together total strangers in January, 1874; we part now strong and true friends. Many of you will remember my expressed condition on taking the gavel two years ago for my third term that it must be my last. I am more than ever fixed in my determination, and ask you in the utmost sincerity that my successor be installed as early as possible.

In conclusion, let me beg of you on returning to your homes to gird on your armor afresh, and, as standard-bearers for the truth, give your best strength of mind and heart to the great work before you, never faltering, but pressing onward to the goal of all our hopes—equal rights, equal representation, happy homes unburdened by debt, where each may sit down under his own vine and fig-tree, feeling that the vocation of a farmer is one of honor, which our children will be proud to follow when our hands grow too feeble to guide the plow.

General Proceedings.

Following the Master's report came those of the Treasurer and Secretary, the former showing a small balance on hand after payment of all demands, and the latter that four granges have surrendered their charters since the last meeting; two consolidated with other granges, and that the charters of two have been revoked. The Secretary said the quarterly reports made to his office, indicated, in his opinion, a stable foundation in the condition of the order. Though there has been some loss in members, the falling off is much less than in the former year, and consists principally of those granges which were dormant though they were reckoned.

Upon a call of the granges by counties for new business, a number of resolutions were offered and appropriately referred. The W. Master submitted a proposed amendment to the Constitution, ordered by the National Grange to be laid before the State Grange, providing for a change in the power to confer degrees by District and County, State and National Granges, which, being referred to the committee on Constitution and By-Laws, its ratification was recommended. The vote on this being a tie, the W. M. voted in the negative, thus rejecting the amendment.

A committee of three was appointed to take into consideration so much of the W. Master's Report as referred to the erection of grain elevators, and another of same number to consider that part which treated of taxation. The composition of these committees will be seen by the list given below, which were announced at the evening session:

Committees.

ON GOOD OF THE ORDER.

Bro. Watkins	of Howard.
" Corey	" Kent.
Sis. Jenifer	" Baltimore.
" Langley	" St. Mary's.
Bro. Hall	" Pr. George's.
" Sudler	" Queen Anne's.
" Goldsborough	" Talbot.

ON GRANGE AGENCY.

Bro. Murray	of Anne Arundel.
" Knotts	" Queen Anne's.
" Barlow	" Howard.
" Tschiffely	" Montgomery.
" Todd	" Baltimore.
" Hess	" Carroll.
" Smith	" Calvert.

ON FINANCE.

Bro. Jenifer	of Baltimore.
" Bond	" St. Mary's.
" Murray	" Anne Arundel.
" Goldsborough	" Queen Anne's.

ON RESOLUTIONS.

Bro. Hartshorne	of Montgomery.
" Robinson	" Anne Arundel.
" Bowen	" Pr. George's.
" Hopkins	" Talbot.
Sis. Tilghman	" Queen Anne's.

ON GRIEVANCES.

Bro. Dodd	of Queen Anne's.
" Suter	" Montgomery.
" Hays	" Montgomery.

SPECIAL ON TAXATION.

Bro. Rose	of Talbot.
" Chiswell	" Frederick.
" Iglehart	" Anne Arundel.

SPECIAL ON GRAIN ELEVATOR.

Bro. Hardcastle	of Talbot.
" Devries	" Howard.
" Jones	" Calvert.

CONSTITUTION AND BY-LAWS.

Bro. Pue	of Howard.
" Robosson	" Alleghany.
" Warren	" Queen Anne's.

The W. M. submitted a communication from Denton Grange, No. 43, now dormant, asking remission of dues. The Committee on Grievances, to whom it was referred, recommended that in the case of this and all other dormant granges desiring to reorganize, the Executive Committee be authorized to remit all dues up to the end of quarter preceding organization, and the grange endorsed the recommendation.

The W. M. reported that the representatives of the Maryland State Grange had failed to obtain action by the National Grange to secure an amendment of the constitution providing for equalized representation of subordinate in State granges.

At the session of Wednesday, Dec. 10, the Executive Committee presented their annual report. Much of this document treats of matters of business routine not of general or public interest, and is entirely concerned with the management of the Agency. Concerning advances, the committee say a certain sum has been placed in the Agent's hands to make advances on goods in hand,—on which advances, when they run over ten days, interest is to be charged. The profits of the Agency for the year ending Nov. 30 were stated to be \$1,281.68, and the entire profits which have accumulated during its existence \$5,044.82. Several months in the year show, however, a loss and not a profit,—so that the committee say a few busy months have to make up for others of comparative dullness.—This, they add, should not be, and would not if Patrons would purchase not only their fertilizers but their supplies more generally through the Agency, whereby its business would be greatly increased.

The committee further recommended that the money in their hands known as the "Safety Fund," amounting to \$1,646, which was contributed by the subordinate granges to insure the success of the agency in its beginning, and no longer required, be now returned to the granges which advanced it.

As a supplemental report from the Executive Committee, the Agent's annual report was also submitted, from which the following extract is given:

State Agent's Report.

* * * "The efforts made at the recent legislature in the grain interest developed unfortunate condition. Not in the spirit of acrimony would we complain, but with a laudable ambition to promote the interest of the whole State and all the people of the State, from the highest to the lowest. Duty requires that this question should be handled with frankness to bring out all the facts; not with a desire to injure either, but promote the welfare of all. No person will question but that the rural districts have contributed largely to the development of our commercial interests by furnishing some of her very best business talent, by helping to mould legislation to guard and build up the interests of our city, of which interest we may justly boast.

But now the grain-growing sections require consideration not hitherto demanded to the same extent. We would not place restrictions upon legitimate trades; we would not for one moment check commercial enterprise, or raise

any barrier to mar our increasing Western traffic. No; but with all the magnanimity of which Maryland hearts are capable, we say, let it come; let its trade increase until our Baltimore shall become, if needs be, the grain centre—yea, the business centre—of the continent.

All we ask is protection, sympathy, fraternal treatment—in other words that the same consideration be extended to us as farmers that our forefathers meted out to the other interests of the State.

May we not with consistency ask the ear, the aid, of our brethren who represent the tobacco section of the State? We do not envy the agency secured them for the protection of their staple if properly managed in the five tobacco warehouses; but the changed condition of agriculture in some parts of the State requires changed accommodations. Is it not a fact that the interest of the earlier settlers of the State were more closely allied than now? Was not tobacco the leading commodity, or product, of Maryland soil? It was a matter of interest then, it is true; but our fathers, by legislation and otherwise, helped to furnish the storage capacity they now do or ought to enjoy. Is it an unreasonable thing, therefore, that we ask their assistance to aid us in averting a danger which is setting in upon us? for under the existing condition of things we do not, cannot, realize the real commercial value of our wheat.

Millers inform us that the real value of Maryland wheat for flouring purposes is from five to ten cents more than Western wheat. This truth is sustained by the fact that the hardier varieties of wheat adapted to our climate and soil improves in quality by our cultivation, when we properly regard the laws of nature in the selection and care of the seed sown.

The present facilities for the receiving and delivery of grain in our State by the different railroads centre here are of right entirely under their control for the uses of track grain, which, of course, precludes water-borne and wagon grain, except under given circumstances. The popularity of Baltimore as a grain-receiving port is shown in the fact that in the brief period of five years the receipts have increased from a fraction over fifteen millions to the enormous sum of some sixty millions for 1879.

It is apparent, therefore, from the limited storage capacity for grain at this port, and our sister States having the preference thereof necessarily, that the grain blockade, judging from the increasing receipts for the last decade, must only be repeated each succeeding year, and our Maryland, with her thirty millions bushels cereals, must be kept in the background, measurably, because our farmers are not united in protecting their dearly-earned products.

It is certainly no compliment to Maryland enterprise, but a stain upon her escutcheon, that Maryland grain after reaching this market, and being sold for delivery at the elevators for want of room, should be forced to float in the Baltimore Basin until so damaged by heating from dampness as to force a resale at a loss to the producer in some cases of twenty to thirty per cent. These are not fancy sketches, but facts.

Patrons, farmers of Maryland, shall we, with the remedy for deliverance within our reach, suffer ourselves to be overmatched by our rivals in trade, or yield our rights to political magnates for a mess of pottage.

I cannot believe that our people would longer endure the evil if the farming sentiment could be awakened, which it would be upon a candid examination of this subject."

That portion of the Agent's report which referred to the substitution for the present system of the Agency of some of the features of the Rochedale plan was referred to a special committee of five, to be designated the Committee on Cooperation, composed as follows: Bros. Thomas, St. Mary's; A. E. Sudler, Queen Anne's; Smith, Frederick; Gorsuch, Baltimore; F. C. Goldsborough, Talbot. This committee did not report, and the subject was subsequently referred to the Executive Committee.

A resolution having passed requesting him to do so, Bro. Geo. Thomas made an eloquent speech describing some of the salient points in the Rochedale system.

The election of officers of the grange to serve for the ensuing constitution term of two years, was fixed for 11 A. M. Wednesday, previous to which hour Bro. Nichols offered the following resolutions, (Bro. Thomas in the chair.) which were unanimously carried by a rising vote:

Resolved, That it is with sincere regret this grange feels compelled to recognize W. Master Moore's declination to longer serve as Master of the Maryland State Grange.

Resolved, That our heartiest thanks are due, and are hereby cordially extended, to W. M. Joseph T. Moore, who has, with such honor and ability, both at home and abroad, fulfilled all the obligations resting on him, and that often at great personal sacrifice.

Resolved, That these resolutions be spread upon the records of this grange, printed in the Baltimore daily papers and the *American Farmer*, and be presented to the next meeting of the National Grange by our representatives thereto.

These resolutions were subsequently ordered to be suitably engrossed, and signed by the proper officers of the grange and sealed with its seal, and presented to the W. M.

The election of officers resulted as follows: Henry O. Devries, of Howard, who has occupied the position of State Agent during four years of the existence of the Agency, was elected Master.

Wm. T. P. Turpin, of Queen Anne's, was elected Overseer, but on his urgent request was excused, and John W. Corey, of Kent, was elected.

James S. Robinson, of Anne Arundel, was re-elected Lecturer.

Thos. S. Iglehart, of Anne Arundel, was elected Steward; Thos. B. Todd, of Baltimore, Assistant Steward; Joseph N. Chiswell, of Frederick, Treasurer; Joseph Barlow, of Howard, Chaplain; Edward Hall, of B., of Anne Arundel, Secretary; Geo. H. Elder, of Baltimore, Gate Keeper; Mrs. Henry O. Devries, of Howard, Ceres; Mrs. Geo. Thomas, of St. Mary's, Flora; Mrs. Daniel Jenifer, of Baltimore,

Pomona; Mrs. John W. Corey, of Kent, Lady Assistant Steward.

Thomas F. Shepherd, of Carroll, and Geo. Thomas, of St. Mary's, were re-elected members of the executive committee.

The executive committee offered the following resolutions concerning Dr. Dorsey, who was detained from the grange by a sudden illness:

Resolved, That the Maryland State Grange hereby expresses its sincere and fraternal sympathy with Bro. G. W. Dorsey, the tobacco salesman, in his recent severe affliction, and its hopes for his early and complete restoration to health and usefulness, and that a copy of this resolution be forwarded to him by the secretary.

The Committee on Tobacco Inspection was remodeled so as to stand as follows: Bros. Bond, St. Mary's; Langley, St. Mary's; Hall, Prince George's; Hays, Montgomery; Jones, Calvert; Iglehart, Anne Arundel.

The Committee on Finance reported the Treasurer's and Secretary's reports agreed and were found correct, with vouchers for all expenditures; that the action of the executive committee in regard to salaries of Agent and employees, should be approved, which was done, and that the "rebate fund" (\$1,429.41) in the Agent's hands be used to replace the safety fund in the event that the latter should be ordered returned to the granges contributing it, which was also approved.

The Committee on Good of the Order made its report, of which the following are the material parts:

The resolution from Patapsco, No. 125, that provision be made for a Lecturer to canvass the State was approved, and the following resolution was, as amended, adopted:

That not less than \$500—and in the discretion of the Executive Committee an additional \$500—be appropriated by said Executive Committee to pay the expenses of such lecturers as they may employ to canvass so far as possible the entire State in the interest of the Grange.

On the resolution of Brighton, No. 60, for the printing in cheap form of the Maryland Code, the committee were of opinion it cannot at present be carried out.

Regarding changes at State hay scales, recommended reference of subject to representatives in legislature. Concurred in.

The committee approved the recommendation of the W. M. that the safety fund be returned, so far that any grange making demand for its share within six months should receive it; but this was amended so as to request the Executive Committee to at once return the contributions to the fund to each grange whose charter has not been revoked.

The Committee on Resolutions, to whom was referred the reports of the Committees of the National Grange, reported, endorsing the same and recommending to the careful and appreciative study of the Patrons of the State the report of the Committee of the National Grange on Transportation as suggesting the most effectual method of obtaining such concessions as our numbers and importance make only just and right.

At the morning session of Thursday, Dec.

11, the committee on Fertilizers made a report, which was adopted, recommending the appointment of a committee "to prepare a memorial for general circulation and signature, asking the General Assembly for the passage of a law looking to the erection of an agricultural experiment station, similar in its operations to that now at work in the State of Connecticut, whereby a system of voluntary inspection of fertilizers may be inaugurated, and the trade in fertilizers placed on a firm and safe basis, and whereby experiments may be carried on," &c. The committee was appointed as follows: Bros. Thomas, St. Mary's; Sands, Baltimore; Hardcastle, Talbot.

At 1 P. M. the officers of the grange were installed,—Bro. P. A. Bowen officiating, assisted by Bro. E. L. F. Hardcastle.

The Committee on Grange Agency reported, expressing gratification at the present standing of the Agency in business circles in Baltimore, and urging the membership to deal more fully with it.

Recommending that members of dormant granges be allowed the benefits of the Agency, as far as possible, when the Agent is satisfied of their fidelity. Adopted.

Recommending that as the meetings of the Executive Committee are almost exclusively to manage the Agency, that its expenses be paid out of earnings of Agency. Adopted.

Commending the fidelity and diligence of the Grange Agent and his employees for the faithful manner in which they have discharged their duties. Concurred in.

The Special Committee on Grain Elevator reported, heartily approving position of State Master and Agent as to accommodations needed for Maryland grain; and recommending that as it is necessary, to be effectual, an united effort should emanate from the body of the people, a memorial to the legislature on this subject be prepared by the Executive Committee, and that they have it printed and circulated for signature throughout the State. Adopted.

The following resolution was adopted:

That in consideration of the valuable services rendered to the Order of Patrons of Husbandry from its first organization in the State, W. Past Master J. T. Moore is hereby made an honorary member of the Executive Committee of this grange.

At this session the W. Past Master communicated to W. M. Devries the A. P. W., and it was by him imparted to all masters of granges entitled to receive it.

On the question of taxation of mortgages no action was had, discussion demonstrating there was wide divergence of views on the subject entertained by the members of the grange.

The final session of the grange was held Thursday evening, December 11th. On a call of counties, Bro. Buckman, of Baltimore, submitted notice of the following proposed amendment of by-laws:

"Amend Article 9, sec. 3, par. 1 of by-laws, so as to read as follows: There shall be an Executive Committee consisting of three members of the State Grange, one of whom shall be elected for three years, one for two years and one for

one year; and their successors shall be elected one every year thereafter to serve for three years."

On motion of Bro. Hardcastle, of Talbot, Bro. Wm. B. Sands, for efficient services in assisting the secretary of the grange, was tendered its thanks by a vote which was taken standing, and was unanimous.

No action was taken on the subject of tobacco inspections. Some variance of opinion was shown to exist, and it was thought the position of the grange was everywhere recognized by its frequent utterances in the past on this subject.

The grange then adjourned to meet on the second Tuesday in December, 1880, at 2.30 P. M., in the city of Baltimore.

Preserving Corn-Fodder by Ensilage.

In a number of the agricultural papers of the North we find statements of the result of an experiment in preserving green corn-fodder according to M. Goffart's plan, frequently referred to in the *American Farmer*, by Mr. John M. Bailey, of "Winning Farm," Billerica, Mass. The first silo, or trench, of that gentleman was opened on December 3d,—a number of gentlemen interested being invited to be present to witness it.

The pit, or silo, is described as 40 feet long, 12 wide and 16 deep, the capacity being estimated at 200 tons green fodder; but it was only about half filled, eight days time having been consumed in cutting with an "ensilage cutter," made by the New York Plow Co., as it came from the field, the corn from six acres of land, a part of which was sugar-corn and the balance Southern white. The stalks were cut to a length of 4-10 of an inch and thrown direct from the machine into the pit, where it was spread and tramped down by two men. A layer of rye straw a foot thick was placed on the mass of cut fodder, and over this two courses of boards, 1½ inches thick, on which rested 50 tons of stone. The work was completed September 30.

On opening the pit there was found on top a layer of the fodder about two inches thick, entirely spoiled, but under this the material was in good condition, though extremely sour. On exposure to the air it became sweeter, with a slightly alcoholic taste. The cattle to which it was offered rejected it at first, but afterwards they, as well as the sheep and hogs, ate it with avidity, and Mr. Bailey considers his experiment "a perfect success."

Corn loses one-fifth by drying, and wheat one-fourteenth. From this the estimate is made that it is more profitable for farmers to sell unshelled corn in the fall at seventy-five cents than at \$1 a bushel in the following summer, and that wheat at \$1.25 in December is equal to \$1.50 in the succeeding June. In the case of potatoes—taking those that rot and are otherwise lost, together with the shrinkage—there is but little doubt that between October and June the loss to the owner who holds them is not less than thirty-three per cent.

Live Stock.

On the Management of Sheep.

Messrs. Editors American Farmer :

Having an insatiable desire for the acquisition of all knowledge possible to be desired, (with which your journal is often replete,) and a perfect willingness to impart what little experience I have had in the culture and management of sheep, I will once again obtrude upon the patience of your many readers, hoping, thereby, to draw from some of them their experience to enable me and all other farmers to become more proficient in taking care of and extending so valuable and necessary a culture.

Like the cereals and the meat-growing business of our country, wool-growing is as much a necessity, and is the sheet-anchorage of much of the wealth of Australia and South America, and also is becoming a trade in Europe and North America that is supplying a demand in plenteousness, which would cost otherwise vastly more, had it to be supplied from other countries. Never, while unwashed wool is worth from 20 to 30 cents per pound, and a corresponding price paid on manufactured goods, need farmers fear to engage in sheep-raising. Let every farmer keep as many as will not mow down his pastures too closely, at the expense of just necessary working animals of other classes and milch cows, and my experience proves that the spring, summer and autumn will be redolent with the smiles superinduced by the profits of this little trouble and pleasing occupation. Sow timothy on your wheat fields, with clover and orchard grass, and if well taken in sod, although it may not rain for weeks and the luxurious top dies off the grass, and in such case that the cow and the horse will pine for grass and water, then it is that sheep grow fat and drop among the sods such manure as will vastly improve the soil. Although better to have a constant supply of good clear water, yet, where other stock would die they will flourish, and we have known them to go without water for weeks. Allow no stagnant ponds, where geese and hogs have access to puddle and mire, for we believe that from such cause many flocks become diseased.

If your grass fields are scant, prepare your sheep for the winter by feeding with a little grain and hay; keep out of cold rains and storms; in short, keep them fat and they will yield a great deal more wool and raise more lambs. It is poor economy to starve them, for in many instances on account of deficiency of strength to raise a lamb, a mother will disown her offspring, which is instinctive, and also is a far greater loss than the expense of feeding extra. We do not advise everyone to breed thoroughbreds, as the cost in doing so will be immensely more, except for breeding purposes. A thoroughbred ram is always advisable. The cross between thoroughbred rams and native ewes will make as good mutton, and will shear good fleeces; and if you have any bare-bellied ewes, breed first to an improved Merino ram, and breed up then to Cotswold, and you will have a densely-covered woolled as well as good mutton

sheep, and such a sheep will knock the profits from under the best Longwools for tuft in forehead and covering of the belly and legs, and is a first-class sheep for the butcher and for wool. The virtues of Merinos crossed upon Cotswold and bred up to Merino were discussed by the writer in your July number of 1879. Now, I don't wish to be understood to advise these crosses for the breeding purposes, but in all cases breed from the best ram of whatever variety you are trying to build up. We claim that a thorough Cotswold or its grade is the best sheep grown, because it matures earlier. It is often the case that at one year old the ewes bring a lamb and also shear their heaviest fleece; and at eighteen months you have a fully-matured sheep. You can cross them upon the Southdown and propagate a splendid mutton and wool sheep, from which the renowned Oxfords are derived. You can cross upon the Merino and such a sheep as is herein described; and upon the Leicester there is propagated that class of fine-wooled sheep that has displaced in many instances the original of both parents. The above facts are evidences of the purity of Cotswold blood, and, like the Chester hog, is more prepotent than any other variety.

Prepare for winter! Have your garner filled with roots, bran and oats, with a very little corn. Feed only when your fields are covered with snow; and when your lambs drop, feed plentifully on the above food, and in a few weeks your lambs will be fit for the butcher and will be worth more in six weeks than an ill-fed one will in ten weeks. Sheep like a variety of food, and what other stock reject they will devour with avidity and fatten on it. They clean your premises of noxious weeds and of much filth, so that your grain grows free of tares, and presents an inducement for a good sale.

There is a great deal said about the destructive ravages by dogs, which in our opinion can only be prevented by stabling at night and watching through the day. Use a well-ventilated stable, slatted on the south exposure from the the invasion of worthless curs.

As I am dealing with the subject in a random way, I will revert briefly to the unsatisfactory manner in which fairs are often conducted. The managers should be very careful that exhibits are not made of diseased animals; also that none but competent and impartial judges are selected to award the prizes, free from personal and individual preferences. It is to be hoped that agricultural clubs will be organized in every county in this State and every other State, that a competition may arise between farmers in the rearing of choice stock and farm produce in general.

Now to the following theories and we are done: "It is said where a dam is bred for the first time to a cross (in the case of all animals) that she becomes impregnated with the cross, and although if afterwards bred to her own kind her subsequent offspring will partake of the first sire. Also if you have on your premises either fine or poor specimens, that the young will often look like them; if so it is perhaps from the impression the dam receives at conception." Any one who can give information on the above theories would correct errors unin-

tionally made, and improve the appearance of their young stock by keeping nothing but fine-looking specimens on their premises, if the above theories be correct. Hoping my random expressions may elicit a reply without criticism, I am, yours very truly,

Ed. C. LEGG.
Kent Island, Md., Dec. 14th, 1879.

Merino Sheep.

Messrs. Editors American Farmer:

I will give you my reasons for preferring Merino sheep. I have been keeping from 75 to 150 for over nine years; in that time have not lost one by disease, nor more than five or six by accident. This year one of my neighbors had a dog that bit off the ears from two, which I killed to put out of pain, and the owner killed the dog.

In winter I feed them on hay, straw and corn fodder. After the ewes drop their lambs I give the ewes turnips and sugar beets, cut up and sprinkled with wheat bran, corn chop, and occasionally oil-cake meal, with rock salt and water to go to at pleasure, being careful to change feed as often as possible. When the lambs are two months old I have a hole in the pen large enough to admit them to another pen and not their mothers, when I feed them with a few oats, corn and bran. When four months old they weigh from 45 to 60 pounds. In the spring they go on the old pasture and wood lot; after harvest on the mowing lots, reserving a field for fall pasture. With that treatment the ewes give me a good lamb and 8 pounds of wool,—for which, in fair times, I got 40 cents per lb.; the rams give me from 15 to 20 lbs. of wool; and altogether leave a nice lot of manure. Although they are not so handsome as some of the mutton breeds, they carry the golden fleece and pay 150 per cent. net on investment. My flock is reduced to 65, owing to sales made in Virginia to men who have fine flocks of Cotswolds, who want to try Merinos. We have mutton to export, and have to import wool.

Yours very respectfully,
Baltimore Co., Md. S. K. CROSBY.

Sanitary Management of Swine.

One great fault in the management is to keep too many hogs together in one shed or inclosure. From want of proper protection in the way of housing, hogs are very apt to crowd together in bunches during cold weather; and, coming into the sheds wet and dirty, and being obliged to lie either on old and filthy straw bedding or on a wet and damp floor, their sweating and steaming soon produce a foul atmosphere, and the bedding, not being removed at proper intervals, gets rotten, and adds to contamination of the air. Being thus packed together in the building, the hogs, in a warm and perspiring condition, are next exposed to the influence of cold winds and wet, by being turned out in the morning hours to run in the field among grass wet with cold dew or from rain or hoar-frost, or to be fed from troughs in the yard. Among the common consequences, are, congestion, cold or catarrh,

and, if the so-called hog cholera happens to be prevailing, they are almost certain to be affected with that disease, as their systems, under such management, are rendered predisposed or susceptible thereto. In many places the hogs are kept in miserable sheds, no provision being made for proper drainage, the ground sloping toward the sheds, which, frequently being unpaved, or without proper flooring, are constantly damp and wet, with pools of urine and filth abounding, and with wind and sleet approaching from all quarters. In proportion as the standard of breeding has become higher, so has the vital force, energy and hardness become lessened; and the effects of improper quantity and quality of food, filthy or stagnant water, faulty construction of houses, and undue exposure to atmospheric influences, have become proportionately more baneful.—*National Live-Stock Journal, Chicago.*

Cut Straw for Horses—Castration.

I should be glad to know if cut rye or wheat straw injures the stomachs of horses. I have heard lately that cut straw, rye or wheat injure horses, and even kills them in a short time. Now, please let us have your opinion on this subject. Also, I desire to ask you if castrating a colt under 12 months old has a tendency to produce hernia. I have heard that colts cut while quite young has a bad effect in producing hernia. Is this so? Everybody agrees that colts are stronger and appear better when let alone till they are three years old, but some think it best to castrate before weaning.

Please answer through *American Farmer*.
North Carolina. C. E. BENNETT.

ANSWER.—Cut rye or wheat straw is harmless to horses, though in the young unaccustomed horse it often brings on bleeding of the mouth from scratching the delicate mucous membrane. Whole straw should be preferred to cut straw, for the advantages of the latter are counterbalanced by its very grave inconvenience of preventing a thorough mastication, which is the essential of a food digestion. Scrotal hernia arises from violent struggles of the animal while under the operation or in the act of rising. This is apt to occur at any age. Colts can be castrated at any age, so long as the testicles are down and well developed. However, the age more suitable is from two to three years old, for in them there is more strength to bear the operation, besides those organs being, as a rule, well developed.

D. LEMAY, V. S.
152 Saratoga Street, Baltimore.

Keep Teats Dry.

In the case of late (or early) calves and foals, a warm stall or box should be secured, if the dam is allowed to do the nursing. In the same way the hands should be kept dry in milking cows in the cold season, and the filthy practice of dipping the hands into the milk cannot be too strongly condemned. Wetting of the teats means evaporation, chilling, inflammation, chapping; followed by trouble in milking, a habit of kicking, or holding up the milk, loss of teats, or even loss of a quarter.—*Live-Stock Journal.*



Nogeant was imported from France in 1877, by E. Dillon & Co., of Bloomington, McLean county, Illinois, and has been awarded the highest premiums, sweepstakes and first premiums at the State fairs of Illinois, Iowa and Missouri.

Percheron Horses.

This breed of horses is well known in this section; they were introduced into Maryland from France some years ago by Mr. Wm. T. Walters, of Baltimore, who, after having raised a number of their progeny, scattered many of them abroad by a public sale, as was recorded in the *American Farmer* at the time. Since then, Messrs. E. Dillon & Co. have entered largely into the importation, and, in their catalogue forwarded us by these gentlemen, we learn that they are now known throughout the length and breadth of the land,—from the Gulf of Mexico to the Straits of Mackinaw, from New York to San Francisco. They have made ten importations, which include 83 head, and have now on hand over 100 head of stallions and mares, among which are 41 full-bloods,—a choice lot to select from. Messrs. Dillon & Co. give a list of the sales of full-blooded and grade animals, and the names of purchasers with their residences, and the date of purchase—a formidable list.

We have, in frequent allusions to this breed of horses in these pages, given a full description of them, and therefore need not repeat the same, but will merely add the following from Prof. Magne in regard to them:

"Fine Percherons show the following characteristics: 15 to 15½ hands high; sides round; withers thick and standing out well; loins large and well-sustained; the crupper, fleshy and a little sloping, sustains a firmly-attached tail; the haunches are prominent. In length and obliquity the shoulders correspond with the finely-formed crupper. The chest is strongly made; the head rather long; very expressive face, although the forehead is slightly convexed; the limbs are well-set, muscular, and with small amount of hair; the coat is dapple-gray, inclining to iron-gray while young."

AT THE SMITHFIELD, LONDON, CATTLE SHOW, held Dec. 8-12, the £50 silver cup for best steer or ox, the £50 cup for heifer or cow, and the 100 guinea Champion Plate, all went to Short-horns—the first and last in competition with Devons, Sussex, Hereford, Scotch and Cross-breeds; the second with a Hereford.

At a sale of imported Jersey cattle by E. P. P. Fowler, in Philadelphia, December 2, the cow Pansy was bought for \$350, by J. E. Phillips, of Baltimore, and the same gentleman has recently bought from Sam'l J. Sharpless, Philadelphia, the Jersey bull Alvoy 3,212—the first-prize animal in his class at the Penn. State Show of last year.

The Poultry Yard.

By G. O. BROWN, Mountvue Poultry Yards,
Brooklandville, Md.

Poultry Diseases.

Fully nine-tenths of the diseases from which fowls suffer are simply and solely caused by vermin. Careful investigation has established this as a fact. The comb of a fowl may be considered its health-indicator. The first intimation a close observer of his flock has, is the condition of their combs. Comparatively few birds, in their natural, wild state, die of disease. They have certain ways to keep themselves comparatively free from lice; fifty are not crowded in a space where only twenty-five should be; nature's (bird) laws are not transgressed, and they thrive in health. With domestic fowls it is different: they are crowded together, become lousy, and get the "cholera," roup, canker and various *sorforts*,—none of which would they have if lice were not preying on their bodies,—unless it is roup, which is caused by several things.

To avoid many of these troubles, watch your poultry, and the first time you see a hen moping around or refusing to eat, or one with feathers rumped up, or comb looking dark blue at the end, pick her up and look for bugs. *You will find them.* Grease her well (with an ointment made of lard and sulphur) under the wings and over the vent and on the head. Perhaps if you examine the roosts in the hen-house, by taking them up and looking on the under side wherever the ends of the roosts rest on anything, you will be astonished to find the numerous little red lice congregated there. These may be termed the *chinch* of the hen-house, as they torment the chicks at night and return to their hiding-places before the fowls leave the roost. The roosts should be frequently washed on all sides with coal-oil.

Roup

Is a very disagreeable disease in all respects. It is produced by having too many fowls in a small place, dampness, sudden change in the weather, lousy birds, &c. Birds late in moulting are often affected with it, being very susceptible to the changes. Its first indications are difficulty in breathing, a very offensive breath, running discharge at the nostrils, swelling of the eyes and head; the head becomes very feverish—often a rattling in the throat. Sometimes there is a loss of appetite and sometimes not. Often the affected bird will become blind. In mild cases wash the head and mouth out with warm vinegar or soda water; keep in a dry, warm place; feed soft food seasoned with stimulants. Isolate all cases from other fowls, as by drinking from the same dish the disease is contagious. In severe cases the only effective cure is the *hatchet*.

Apoplexy

Is another disease which the Asiatic fowls are somewhat subject to. This is generally brought on by *over-feeding*. A majority of people overfeed their Brahmas and Cochins, and the consequence is they lose them by this disease, or, in other

words, they kill them by kindness. It is easier to prevent most of these diseases than it is to cure or doctor them after they are once established. By always having clean, well-ventilated quarters, free from dampness, all cracks well battened, so no draught of air can pass through; houses so arranged there can be sunlight in them; clean feed at all times and pure fresh water, diseases of any kind will be scarce, and your birds be enough more profitable to well repay all extra care you may be disposed to show in their behalf. Chicks are not as susceptible to diseases of the above kind as fowls. The gapes will never occur if the young chick's head is greased with lard as soon as hatched and dry. The mother should also be well greased.

G. O. B.

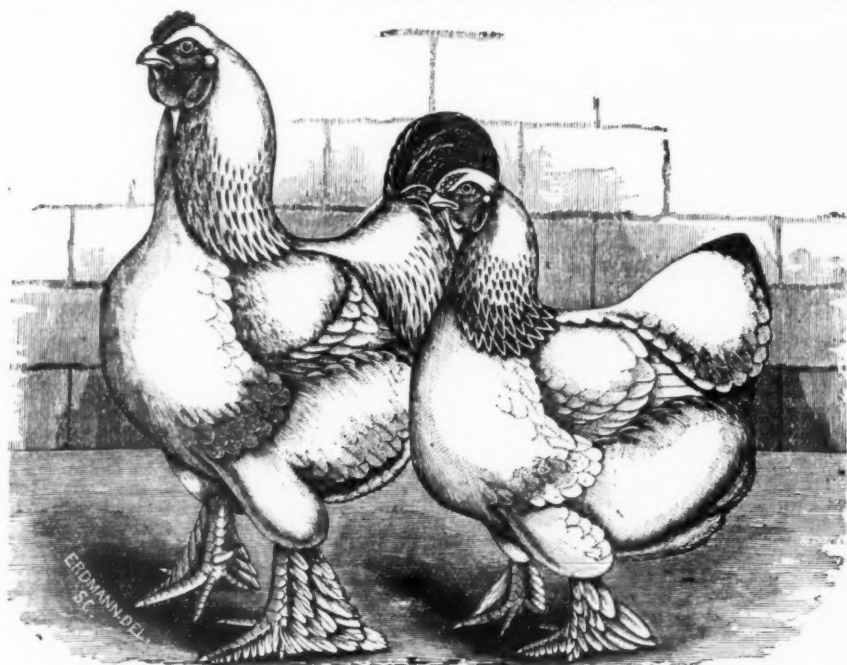
Bantams.

Among the most attractive of our domestic feathered pets may probably be classed the beautiful little Bantam fowls, which, when bred in perfection, are certainly extremely handsome. Many people think they have the pure-bred Bantams, when they have simply a cross of the Bantam and the common fowl. The Bantam family were originally introduced from Bantam, a town and kingdom in the island of Java. Since their original introduction the breed has ramified into numerous varieties. Nearly all the various breeds of games have their counterparts in the miniature Bantams, being in exact feathering precisely the same. Among the game Bantams we have the Black-Red, Brown-Red, Silver and Golden Duckwings, White, Pile and Spangled. The Black-Breasted Reds (as is also the case with this breed of large games) stand confessedly at the head of this class of Bantams. The Sebrights comprise two varieties: the Golden and Silver. Sir J. S. Sebright, of England, is credited as their originator. They are very consequential little atoms, the strut or dandy of the barn-yard. The Golden are bred very extensively; but the Silvers, owing to the difficulty of breeding clear silver-white plumage, are not bred very numerously.

The hens and cocks are feathered alike, the cock being without sickle feathers. The Black African Bantams, as their name would seem to imply, are solid black, with fine clean-cut white ear lobes. They may almost be said to be the exact miniature imitation of the Black Hamburg. The African Bantam cock has long beautifully-curved sickles, and on a lawn they make a grand appearance. The White-booted Bantams are admired by some. They are more leggy than the game Bantams, and in wet weather their extensive leg and toe feathering becomes wet and draggled, and they soon present a sad appearance. The newest and latest introduced are the Japanese; their color varies. They differ from the other varieties by having a large single serrated comb. Like fantail pigeons, the tail is carried so erect that often the head and tail will almost touch. There are several varieties of lesser note. Bantam cocks are as a general thing very pugnacious. The hens are careful, fussy little mothers, but do not like to be bothered with other chicks than their own. All varieties are good layers, but the eggs of the Sebrights

have a large percentage of unfertile ones. The chicks are hardy, getting their complete coat of feathers very soon. They should, however, until completely feathered, be fed liberally on animal food and kept dry. They are wonderful foragers after insects, and exceedingly useful in the garden, where they will do little or no damage. They can be kept with the Asiatics and other good-sized fowls without fear of crossing. All varieties are great pets and become very tame and soon get acquainted and attached to their keeper. Farmers who are desirous of

obtaining suitable pets for their children will find such in Bantams. The care and ownership of such pets will teach the boys industry, and, in a measure, their idle time will be employed in looking after and caring for *their* pets in a much more proper way and in better company than if they had not such attractions at home. I could name a prominent poultry-breeder who now transacts a business of several thousand dollars every season in poultry, whose first venture in this direction was a pair of Golden Sebright Bantams.



Light Brahmas.

There is no breed of fowls so extensively bred in this country as the Light Brahmas, and none that have stood the test and continued to hold the estimation of the public as has this valuable variety. They were first brought before the public in this country about 1852, and from the very start their popularity was astonishing. Yet to-day their popularity exceeds that of any other variety. The Brahmas of to-day are, however, superior, not only in feather and what fanciers would designate "fine points," but in size and symmetry to those of a few years back. A Light Brahma cock was exported to England in 1872 and shown there which weighed upwards of eighteen pounds. This is, however, above the general average. We do not advocate large Brahmas. Cocks at a year and a half should weigh about 14 pounds, and hens of the same age should weigh from 11 to 12 pounds. We think at these weights they lay better, and are superior in many respects to those heavier. The

past month, while judging with I. K. Felch, Esq., at the Germantown, Pa., poultry show, we weighed a cockerel eight months old that weighed over 13 pounds. Unlike the Cochins, the Brahma is comparatively a close-feathered bird, and will always prove heavier than they look. The handsomely-executed cut, kindly furnished by J. C. Long, Jr., of New York, will give a most excellent idea of the fine-bred Brahma, and so well portrays correctly their markings that any description would be superfluous.

Care should be taken in feeding Brahmas *not to overfeed*. They never should have thrown to them all they will eat, as they fatten very easily, and if fed too much soon become too fat and will then produce but few eggs. The chicks are very hardy, more so, have they proved to be with me, than any of the Asiatics. They are quiet, domestic, and where not fed to repletion are usually good foragers. One male bird to about nine hens is generally used.

The origin, or first introduction of the Brahma in this country has been a disputed point, several claiming the honor of being the first breeder, &c.; but it seems to be a generally conceded fact that the first pair, from which was laid the foundation for their extensive dissemination, was purchased from a ship in New York which had sailed from a port in India called Luckipoor, situated on the Brahma-Pootra river, by a gentleman and sent to a Mr. Chamberlain. The vessel arrived in New York during Sept., 1846, and the first brood was hatched during the following May, 1847; subsequently the most of the brood, and also the original pair that had been imported, were purchased by a Virgil Cornish, of New Britain, Conn. They were first exhibited in Boston by a Mr. Hatch, of Hampton, Conn., in 1850, and called Chittagongs. A committee appointed (at the solicitation of Mr. Cornish, who contended they were not Chittagongs) changed the name to Brahma-Pootra. Light Brahmas, as they are now called, are the leading class at all our poultry shows. G. O. B.

The Dairy.

Butter Making.

Messrs. Editors American Farmer:

As regards your request that I should draw on my experience for an article for the dairy department of the *American Farmer*, it is with much diffidence that I make the attempt, well knowing that "physician, heal thyself!" is as applicable in this case as in any other, for, if perfection in butter making had been reached, then there would be an end of disquisition, and no further call for experiment; and it is to this that I would recommend your readers, and not a reliance on what may be said by others.

I will, as briefly as possible, give my own views on how to make butter, hoping it may be the first of a series of articles on the subject to be published in your journal during 1880.

To make good butter requires good cows; those not necessarily giving a large flow of milk, but a regular flow of rich milk, which will make butter of a waxy texture; and, to please the eye, of a deep yellow color. Without cows having this quality, choice butter cannot be made; and as such I will speak a word for the Jerseys, as they almost universally make butter of this character, if other conditions are observed.

Cows to be milked by a quiet attendant, at as near regular times as possible, with the addition of the master's eye, and hands, too, if practicable.

Milk to be strained and set in water, which I much prefer to a dry dairy, as the cream rises quicker and does not dry on the surface so much as when partially cooled by evaporation; depth of setting immaterial, so far as the raising of the cream is concerned, though I much prefer deep setting for economy of room and labor, and also as exposing less surface of cream to the action of the air, with its varying temperature and odors. A spring-house furnishes the most convenient mode of setting milk, but the recently invented contrivances for cooling milk by the use of ice and water will answer a good purpose

when a cool spring is not convenient, and are much to be preferred to a vault or cellar; which, though it may have the requisite coldness, its lack of ventilation precludes the possibility of making choice butter in hot or sultry weather.

The Cooley creamer will answer as an illustration of this class of dairies, but I do not think any of them possess any advantage over a simple tank with the ordinary deep-setting pail.

Skimming should be done early. By careful test I am convinced that all the cream contained in milk set in water (tested at temperatures varying from 40° to 65°) is at the surface in from two to four hours; but as in its then thin state cream is easily stirred back into the milk, my custom is to skim at 12 hours, and skim a second time at 24, the last cream being but a thin coat, (about half-a-teacupful to 3 gallons of milk,) is easily taken off, when the milk will be practically free from cream. If I were using ice for cooling I should skim between milkings, but only once, as the additional cream would not pay for the labor and ice required.

Stir your cream every day.

Cream should be churned when slightly sour. In winter once a week, in summer twice or three times; or souring may be retarded by keeping the oldest cream on ice, in which case, by great care, once a week will answer.

For churning the simplest and best churn that I have seen is made by Speaksman & Mills, of Westchester, Pa., and is driven by horse-power, with a capacity of one hundred and twenty gallons, or will churn five; the proper temperature for churning, with this churn, is 55° in summer or 58° to 60° in winter, the butter coming in about an hour. On drawing off the buttermilk throw on a few gallons of cold water to rinse off what buttermilk adheres to the butter when removed to the worker. The one I have in use is Reid's No. 2, which will work 30 pounds in 5 minutes. Salt with finely sifted salt, from $\frac{1}{4}$ to $\frac{1}{2}$ ounce salt per pound to suit taste of customers, and let it set for 24 hours for the salt to dissolve—then work, print and pack for market.

I have made no mention of the perfect cleanliness required in every article or vessel used, for unless everything is kept perfectly clean good butter cannot be made. GEO. L. STABLER.

Montgomery Co., Md.

[We hope Mr. Stabler's suggestion may be adopted, that this will be followed by a series of dairy articles, plain and practical as his own, in the volume of the *Farmer* just commenced. This is a branch of farm economy in which we have ever taken great interest, and the index of the last volume shows the extent of the space we allot to it.—Eds. A. F.]

PROF. L. B. ARNOLD advises skimming the milk as soon as sourness is perceptible, and to churn at 60 degrees instead of 70, before the cream gets very old and sour. When the butter comes in granules, enough cold water or brine should be put in to reduce the mass to about 55 degrees, when, after a little slow churning, the granules will become hard and distinct, and the butter be in condition for washing out all the buttermilk. The salt should then be worked in with as little labor as possible, and after standing awhile it will be ready to pack.

The International Dairy Fair,

Held in New York, December 8th to 20th, was probably more successful as a display than that of last year, but was not so well attended. Conspicuous features were the steam cheese factory in full operation, the dairy cattle, and the immense pillars of cheeses and salt, besides the enormous quantity of cheese and butter, and a large collection of dairy implements.

The dairy cattle included representatives of the Jerseys, Guernseys, Holsteins and Devons. The milk produced by them, besides considerable purchased, was worked up in a dairy cottage on the premises into cheese, curds and butter, or sold by the glass, the pure article furnished offering doubtless a new experience to many of the Gothamites.

The exhibits of cheese and butter were mostly from New York, the West and Canada. There was nothing from this section of country. The premium of \$100 for best cheese made anywhere to a Montreal (Can.) exhibitor, and the sweepstakes of \$100 for best butter, of any kind, made at any time or place, went to a Wisconsin maker. The total premiums awarded aggregated about \$8,000, of which Iowa got the lion's share, especially on butter, taking altogether twice as many premiums as were given to exhibitors from any other State.

Among the novelties exhibited were two centrifugal cream-separators, one from Denmark and one from Boston. It is claimed that it separates the cream from new milk at the rate of 600 pounds per hour by rotating a cylinder of milk so rapidly that the skim milk, by reason of its greater weight, will fly to the outside of the vessel, while the cream is left in the centre, when each is drawn off into separate receptacles.— Their work attracted the most earnest attention of the practical men present, but one of the New York papers says they failed to see in the results much to admire. The cost of the machine and the necessity of power to run it put it out of the reach of the common dairy farmer, and its operation is too slow for the use of creameries.— Where large quantities of milk are daily received it would require too much time to mill the milk or too much outlay in machines to do the work in season, as it now appears. Perhaps in the future the separator may be improved to meet all necessities.

A number of addresses were made during the fair by well-known dairy specialists. The president, in his opening address, gave some statistics of the dairy business in the United States. He said, according to the latest estimates, there were in this country 13,000,000 of milk cows, from which, in 1878, 340,000,000 pounds of cheese were made, and 960,000,000 pounds of butter. Of this, 3.9 per cent. of the butter and 41.6 per cent. of the cheese was exported. Denmark, producing but 60,000,000 pounds of butter, exported fifty per cent. American dairymen can produce as fine butter as can be made anywhere, and it is only a question of time when they will command the trade of the world. The foreign cheese trade had been cultivated, but the home trade neglected; so that over forty per cent. of

the entire product is exported. A change is needed in the manufacture, so that the immense home demand could be met; and he thought some of the styles of soft cream cheeses, designed for immediate consumption, should be introduced.

Co-operation Among Milk Dairymen.

The *National Live-Stock Journal* has the following suggestions concerning the supply of milk to consumers in cities, and which, in principle, are applicable here, although the class of middle-men referred to has no existence in Baltimore or Washington as in some other cities.

"There is no branch of dairying that more requires co-operation than this, both to assure compensation to the producers and the purity of the milk to the consumer. Great populations in our cities are grossly cheated with an impure article of milk, at a high price; and the milk dairymen are pressed down to the lowest fraction they can be induced to sell it for, and the middle-men combine to force their terms upon the milk farmers. Were these milk farmers as well educated in their business as are the middle-men in theirs, does any one suppose they would not find means to demand a reasonable compensation for their product? Here co-operation would not only accomplish this, but if necessary they might dispense with the middle-men altogether. It would not require a high degree of business ability to organize and execute a plan for delivering the milk to consumers. These milk dairymen have the whole thing in their own hands, and can either dictate the price to middle-men or deliver their own milk. The dishonest practices of these milk venders largely reduce the demand for milk, and thus bring a second injury to milk farmers. Does it not show a great lack of business and organizing ability in these milk farmers to allow themselves to be thus dealt with? If five hundred dairymen can organize to run a creamery on the new plan, why may not that number, or twice that number, be organized for the delivery of milk to consumers in cities? Certainly they may form an association of all or nearly all those who produce milk for city consumption, and the producers are certainly in a condition to set a price upon their own product, instead of allowing a half-dozen milk venders to do it. Here a well-regulated association would produce the happiest results. This question is now occupying the attention of the Bedford Farmers' Club, that is seeking to devise some means to insure the delivery of pure milk in the city of New York. They incline to the use of sealed cans, sent to a central depot, and distributed in sealed glass bottles."

Supplying Pure Milk.

The Bedford Farmers' Club, referred to above, at a recent meeting, according to the New York papers, formed a co-operative association of milk-producers, whose object is to secure better prices for the producers, and

better milk, at a less price than at present, for the consumer. It is proposed to send the milk to a general depot in New York City in sealed cans, there to be put into sealed jars or cans for delivery to consumers, the seals being intended to prevent adulteration by the drivers. Among the rules adopted were the following: No milk shall be furnished from any diseased cow. No brewer's grains, distillery food, or other food of like character, shall be fed. Roots shall be fed only at such times and in such quantities as not to injure the quality of the milk. Milking shall be done at regular hours, and only by persons of cleanly habits, and no person who has been exposed to any infectious diseases shall milk, or have charge of the milk, without a change of clothing. The animal heat must be removed immediately after milking by cooling in water of not more than fifty degrees, and the milk must be kept at no higher temperature than this until shipped to the city. All utensils used in milking or in keeping the milk must be promptly cleaned or scalded with boiling water or steam, and they must be kept well aired. Stables must be well lighted, well ventilated and cleaned every day, the stalls well littered with straw or other clean bedding material, and the walls and ceilings must annually receive a coat of limewash, and every cow be kept clean.

Centrifugal Cream-Separator.

Land and Home gives a cut and description of De Laval's centrifugal cream-separator, which received the silver medal of the Royal Agricultural Society at London, and honors at the show of the Dairy Farmers' Association. Its claimed merits are, briefly, that by means of centrifugal action the rapid and complete separation of the cream from the milk is effected. The operation may be commenced immediately after milking, and not only is a saving of from 24 to 36 hours effected, but a larger percentage of butter is obtained also. The action of the machine, if desired, is continuous, the cream being separated as fast and as long as the milk is fed into it. Under the test, 30 gallons of milk were passed through the separator in 52 minutes, and the cream, which was immediately churned, produced 10 lbs. 3 oz. of excellent butter, and the skim milk was sweet.

The same paper says: Mr. Edward Burnett, of Deerfoot Farm, is buying milk from his neighbors, separating the milk by the centrifugal machine, and shipping the cream and skim-milk to Boston, selling the skim-milk as such; and the milk-dealers of that city look upon it as meaning destruction to the monopoly they have long enjoyed.

National Dairy Cattle Club.

An association has been formed under this name, the object of which is to test and put on record the yields of milk and butter from cows:

Three classes of records are allowed: Class A, a continuous record for a year of milk or butter, or of both; class B, a periodical record for three days of the first week of each month; class C,

to be the product of one week of milk or butter, or of both. The lowest standard of profit allowed for cows over four years old is for one year of milk, 4,000 pounds; of butter, 200 pounds. For cows under four, 3,000 pounds milk; of butter, 150 pounds. The officers have agreed upon a form of certificate and other details in the future working of the club; they will soon issue a circular explaining its purpose and contemplated plan of operation; meanwhile they solicit the cooperation of all interested in placing the dairies of the country, as well as thoroughbred breeding stock, upon a basis of practical utility and profit rather than the guess-work system now practiced by dairymen, and the fanciful standards of worth among breeders.

The president is T. S. Gold, of Connecticut, who represents native cattle; and there are two vice-presidents and an executive committee of several members, each dairy breed having representatives among the officers. Membership is \$3; the registration fee for test for the first cow in a dairy \$2, for each subsequent one \$1, a discount of one-fourth being allowed members.

Reducing Cost of Production.

At the N. Y. State Dairymen's meeting, last month, one of the speakers suggested that the way to reduce the cost of milk to the producer, was by increasing the milk-giving capacity of herds by more care and skill in selecting and breeding dairy stock. A few years of persistent effort in this direction, it is believed, might increase the products of most farms one-half, without adding to the number of cows. More food being converted into milk, with no increase in the cost of supporting the bodies of the animals, would so reduce the cost of milk as to secure former profits to the farmer at low rates for his products.

Another means to the same end, is better care of stock, especially in the winter season. It costs more food to support animals when exposed to cold than when in comfortable condition. All the fodder which can be saved by avoiding exposure and securing warm quarters reduces by so much the cost of milk. This was made a strong point in the deliberations. Again, it was urged that a reduction in the cost of milk should be made by feeding more liberally, especially in the flush of the milk season, and when the pastures begin to fail from drouth,—thus securing a more uniform and prolonged flow, giving more milk in proportion to the food consumed, and to that extent reducing its cost. Protection against the effects of excessive heat in summer was also urged as a means of obtaining better as well as more product from the same animals. A fourth means of cheapening the cost of milk was declared to consist in better attention to promoting the fertility of dairy farms and in a more mixed character in their productions. The importance of raising upon the farm all that is possible, both for supporting the family of the farmer and the animals kept, was dwelt upon with emphasis. The meetings were greatly enjoyed by all, and four weeks hence a full report will be issued, and sold for the benefit of the association, by secretary J. Shull, Illon, N. Y.

The American Dairymen's Association

Will hold its annual meeting at Syracuse, N. Y., on the 13th, 14th and 15th instant. Papers will be read by gentlemen who are esteemed authorities in their several departments of investigation, and among them we notice Prof. James Law on Hygiene in the Dairy Herd; Prof. G. C. Caldwell on Methods of Testing Milk; Ensilage of Corn Fodder, by Mr. J. B. Brown, whose translation of M. Goffart's work has been noticed in these pages; Mr. Edwd. Burnett on the Separation of Cream from Milk by Centrifugal Motion; Feed and Care of Dairy Stock, by Prof. Roberts and others. Dairy apparatus, implements, &c., will be displayed in the usual abundance.

Dairymen's Meetings.

The Finksburg, Carroll Co., Md., Dairymen's Association met December 10, and the milk shippers in the vicinity of Linwood, December 19, and determined to do all in their power to sustain the State Association; endorsing its action in fixing the minimum price of milk at 16 cents per gallon, though they declare this is insufficient to pay for its production; and resolved, that the members would sell only pure milk, and that any one selling either adulterated or watered milk shall be expelled.

Dairy Items.

Dr. Tidy, medical officer of health for Islington, states that milk was adulterated more than any other article of food, and to such an extent that he had felt it his duty to advise prosecutions in twelve instances. Water was the usual adulterant, and was used even up to thirty per cent., and it is doubtless owing to this that the enterprising venders of "pure milk at 3d. per quart" in North London have been able to carry on the game so long. It is to be hoped that, by the publication of these facts, the public will come round to a belief that *cheap* milk is really the *dearest*.—*London Dairyman*.

Our Maryland milk dairymen are not the only ones who find the selling price of milk has lately been less than its cost of production, and to take steps to increase it.

The farmers of New Jersey who supply the milk dealers of Philadelphia, have resolved that the price of milk to the farmer shall be four cents per quart, and the dealers shall sell to the consumers at eight cents; whereupon the *Sunday Times* of that city says: If the price of milk is to be eight cents per quart, the proportion to the farmer who owns the meadows and the cows, and who feeds and tends them, obtains the milk and brings it to market, ought to be more than to the dealer who hitches his horse to his wagon, goes to the depot when the milk arrives, and leaves it from door to door in the space of a few squares. If the dairymen can sell it for four cents, the dealer ought to be satisfied with a profit of two cents.

The farmers of Orange county, N. Y., refused at a late meeting to take less than 4 cents a quart for their milk until April, voting to hold back their supply if the city dealers are not willing to pay that sum.

The average daily receipts of milk in the city of New York for the week ending December 17th were 8,830 cans of 40 quarts each. The price at which the surplus was sold during the week averaged \$1.73½; beginning at \$1.60, there was a slow but gradual improvement, and \$2 was the closing price. Considerable milk was left over the first four days of the week, but all was cleared out the last three days at the advance. For the week ending Dec. 24, the price averaged, per can of 40 quarts, \$2.03½; beginning at \$2, there was not the slightest change until the 21st, when it advanced to \$2.25 the next day.

KICKING COWS.—I have tried all the various ways to prevent cows from kicking while milking, and have found none more harmless, easily applied and as effectual as the Dutch or Holland method, which is to take a small rope about four feet long, and put it once around both hind legs, just above the gambrell joints, with a slip-knot; draw tight enough to bring both legs firmly together; wind the rope two or three times between the legs, around this rope or noose, drawing it tight, and fasten the rope by a half-hitch. In North Holland this is practiced on all the cows at every milking. They are driven to the milking-ground, where stakes are driven about two feet high, and to these stakes the cows are tied for milking.—*Cor. Country Gentleman*.

Reducing Charges for Weighing Hay.

A meeting, quite well attended, of farmers of Baltimore and Howard counties, was held Dec. 20, in this city, to consider the propriety of asking the Legislature to reduce and equalize the rates charged at the State scales for weighing hay and straw and other produce. The following resolutions were adopted:

Resolved, That the Legislature be petitioned to amend the present hay and straw inspection law by reducing the charges for weighing from 1½ cents per 100 lbs. for hay and straw, and also the charge of 2 cents per 100 lbs. for all other articles,* to such sum per 100 lbs. as may be fixed upon hereafter,—so that the charges for all weighing per 100 lbs. may be uniform.

Resolved, That a committee be appointed to examine what amount of revenue is received from the several scales under the present rate of charges, so that in the memorial to the Legislature the charges for weighing can be fixed at such reduced rates as will relieve the producer from a burdensome tax, and work no injustice to the State.

The following committee was appointed: Dickinson Gorsuch, C. Lyon Rogers, Samuel M. Price, Gerard Emmart, Thos. B. Todd, of Baltimore county, and Henry O. Devries, of Howard.

* By an inadvertence, in our report last month of the Gunpowder Club, the present rates were incorrectly stated to be 1 and 1½ cts.—*Eds. Amer. Far.*

Work for the Month—January.

The farmer has now the advantage of another year to refer to and past experiences to guide him. A look backward may prepare the way for obtaining future successes or avoiding past errors. The season of out-of-door leisure is especially a suitable time for settling upon some fixed plans for work. The adaptation of means possessed to the end sought is not the least element towards achieving satisfactory results. Overcropping, overworking, are mistakes which tell nowhere more certainly than on the farm. Gauge yourself, your means, your working stock, and begin a system which you can measurably and fairly expect to carry out to its full end. At this season one thing which no farmer ought to neglect to do is to

Begin to keep an account of your expenditures and receipts, and as preparatory to this make an inventory of your stock, implements, machinery, products of farm remaining unsold, and all other assets, including money on hand. Accurate account of any debts due should also be kept, so that you will thus be enabled to compare your liabilities with your assets and ascertain just how you stand. A book prepared for this purpose will serve also for a memorandum of operations, the dates at which certain work is done, &c., and thus often afford great satisfaction in future references.

Manures and Composts.—Many favorable opportunities occur for collecting materials for compost piles, and at no season is a team and hand more likely to be available. Mixing decaying vegetable matters, layer and layer about, with good strong manure, will largely increase your supplies of plant-food, breaking down the texture and making available the crude material of the rough matters used.

Drains.—Do not overlook the water-furrows in your grain fields, but see that nothing interferes with free passage of water during rains and thaws.

Tobacco.—The first thing for the planter to do is now, at the beginning of the year, to look around and lay off the amount of land he intends for tobacco and then locate it, recollecting that the crop needs a dry friable soil. Tobacco cannot successfully be grown upon even moist land; it must be comparatively dry. Hill-sides everywhere produce the finest tobacco; bottom land the coarsest and heaviest. If the planter will at once accept these two facts he then can begin his year's work judiciously and possibly make the crop a satisfactory success; otherwise, acting at haphazard, his failure may prove his and his family's ruin.

We repeat our former advice: be careful in stripping; sort well; eighteen is an abundance for one bundle; twelve will do. To those who burn tobacco beds we would advise to prepare the brush and wood and select location. Locate the bed on a gentle slope.

Wagons, Carts and implements ought to be overhauled and put in order, and stored away under cover.

Live Stock.—"We judge of quality and quantity entirely by comparison." For instance: we may have a favorite horse that is a good traveler; we use it every day on the road *alone*, and at last decide that we have a fast horse; must be fast, as no one of the neighbors has one as good; at least, cannot pass us. After a time, becoming so well convinced of the speed of our horse, that we go out among the *fast ones*, how very soon we come home forever satisfied that our horse is *very slow*. Now in the breeding and raising of all of our domestic animals, how important that the breeder should be familiar with the same class of stock that his will be thrown among when they are finally judged, for the last, but not least, important question to be decided, viz: *the money value*. If horses are to be raised, first decide what purpose we had best aim to suit ours for, and then *aim high in quality*, for it is much more the quality that pays than quantity; frequently our first-class draft horse will sell sooner and bring more ready money than a pair of under-sized scrubs, that will nearly cost their cash value in livery bills before they can be sold even at a small price. It is not worth while for us to tell the numerous readers of the *American Farmer* that the world is advancing; that they well know for themselves. But we fear many forget that the buyers of our domestic animals (especially those raised as food for man) are gaining knowledge a little faster than the breeders. Each year there is greater discrimination shown in all of our leading markets. The dealers are fast learning that an inferior animal has never been bought *low enough*. The steer that will make the greatest per cent. of first-quality beef, such as suits the tastes of the wealthy, is the one to raise. At the same time, the less valuable parts will be of much better quality too, thereby giving the poor laboring man a better roast for his money than he possibly can get out a second or third-class steer. What we want is each and every one of our readers, during the long winter, when out-door labor is not so pressing, to look around and see what steps we can take to have a better class of males provided by the time the breeding season arrives. Aim high every time, and don't stop till we have produced such an article as will command the best price. We do not wish to start all to raising "pedigreed stock," for such a course would, by no means, be advisable; but we do say to all, use nothing but a thoroughbred male of the breed that best suits your surroundings.

Butter and cheese have felt the advance more than meat. So that the dairy interest will be rather more likely to be cared for than during the period of its greatest depression. "Butter bulls" can now be had so cheaply that there is no excuse for not getting one, and, if a wise selection is made, the benefit will soon be felt in the pocket of the owner. It will often be found that the grade Jersey gives almost as good satisfaction (as a manufacturer of butter out of early-cut hay and meal) as her more aristocratic relatives that sell for such fancy prices.

In all classes of our domestic animals, the same rules hold good, viz: get good blood, and then feed liberally, in well-kept apartments,

that are suited to the purpose for which they are used, and the final result will surely make a well-filled pocket for the owner.

Poultry.—Give warm, comfortable and light quarters; a diet as varied as circumstances will allow should be given, especially included some vegetable food. Cleanliness is a virtue and a first necessity in successful poultry-raising. See some timely suggestions in our poultry pages.

This is the right time for forwarding the renewal of your subscription to the *American Farmer*, and for reminding your friends and neighbors to do the same if they are already on its mail list, or to add their names if they are not. Do not wait on some one else to get up a club; do it yourself.

Orchard and Fruit Garden.

If 'tis education forms the common mind" there certainly should have been considerable mind-forming accomplished among orchardists and fruit-growers generally during the past fruitful year, as most sections of our great fruit-producing country were blessed with a liberal supply; and as the intelligent orchardist is always vigilant in observing items and events connected with and relating to his calling, a year such as 1879 has been must afford splendid facilities for furthering and enlarging his education in the avocation of his choice. Each ensuing year brings with it varied changes; no less so in fruit-growing than in other fields of employment: the apple that was most prolific this year—was the fairest and finest variety in the orchard—may likely fall far short of such a well-merited high estimate placed upon it in its next effort. Season, culture and condition of the soil all have their influences upon this point. The peach that brought the highest price in market and paid best this season may only wear this distinctive honor for a twelve-month, as no two seasons are exactly alike; neither is the orchardist likely to maintain the same favorable condition in his trees from year to year that brought about such results. For example: the Salway peach that jumped so high in the growers' estimation this season, in some localities, may fall flat on the scale of merit next; though notwithstanding these variations it is a fact well known to all experienced fruit-growers that there is greater uniformity in the crops and quality of some varieties than others.

Fruit-growers are inseparably united upon one point in their occupation, and that is to plant only such varieties as "pay the best." But just here arises the very troublesome question as to which those varieties really are. Only a few years ago in some localities the Red Astrachan apple was yielding large—yea! very large—profits to those who were growing them. Then, though the apples were left to get ripe and fit to eat and use before they were shipped. But at the present time, in these same localities, the same apple is not nearly so popular. There are more of them now; and our observation has been that the larger the supply of all perishable portion; hence it is that in some cases really fruits the per cent. of inferior and sometimes totally worthless fruit is always greater in pro-

meritorious and valuable varieties of fruit suddenly become unpopular in sections where they have been planted largely.

Admitting that the tastes and financial circumstances of the consumers have some influences in regulating demand and prices, we are still unable to rid our mind of the belief that more system and a little less greed among growers when there is a full crop would make it generally more profitable. This is a fact which the dear school of experience has taught to nearly all growers of fruit; but still there are comparatively few who avail themselves of the profit of culling and packing properly; at first sight it looks like a waste and a loss to cull closely and throw aside such culling, instead of filling up a few more baskets, by mixing them with the really good fruit. But practically it is neither waste or loss so to do; for five baskets of fruit carefully culled and packed will, as a rule, sell for as much in market as double that quantity of fruit jumbled together any way in the baskets until the last layer, where the finest specimens are placed, only to be sneered at by the buyers. The gain in the right manner of handling the crop is too plain to require demonstration. There should be more "fruit-growers' societies," presided over by intelligent practical gentlemen, where an interchange of experiences and practices would cause the less thoughtful to emulate their more successful brethren, resulting in the much-coveted finality of better pay for the hard labor performed.

Advertising Live Stock.

We suggest, as well for the benefit of our subscribers, as for our own, that they will find the advertising pages of the *American Farmer* an advantageous medium for making known to purchasers any improved stock as they may have for sale.

Mr. E. C. Legg, who offered Cotswolds and Merino Sheep, informed us lately that he had made numerous sales thereby, and the same day we received the following from Mr. C. W. Hazen, Catletts, Va.: "I have sold all my sheep—I would advise farmers, if they have thoroughbred stock for sale, to advertise in the *American Farmer*."

Our journal is not of a local character only,—although, of course, our own State necessarily secures a large portion of our attention,—but has a circulation and correspondence in most of the States, particularly between Pennsylvania and Georgia; and we have no hesitation in believing that our *bona-fide* list of subscribers is decidedly greater than that of any other paper devoted to agriculture within the region bounded by the States which we name—and some slight idea may be formed as to the solidity of character of our readers, from the fact, that we have on our list of subscribers those who have been receiving it for from 20 to 50 years. Those who have goods suitable for such a constituency as ours, can form their own conclusions as to the advantages of advertising in its pages.

Horticulture.

Pears—Ripening and Marketing—Blight and Slugs.

Messrs. Editors American Farmer :

My pear crop of the past season sold at compensating prices, but my expenses for properly preparing it for market have been heavy, though for a first attempt at ripening have been a perfect success. In a former letter that you published in the *Farmer*, in the March No. for 1879, I most emphatically predicted that in a very short time green and unripe fruit would be discarded from your market, *except for culinary purposes*. This, because I knew that any one would give much more for a properly ripened pear than a green one; since, first, all the loss in ripening falls on the shipper; second, after being properly ripened pears will keep much longer, from the fact that to prevent a loss in ripening they must be taken from the tree when the saccharine matter is fully developed and yet the fruit remains green in color. It is then taken to a house erected expressly for the purpose and ripened, and shipped when in a proper condition.

All such fruit, after going through this process, will keep for *weeks*; in fact, I may say for months if properly cared for.

Now it is an old saying that the proof of the pudding is in *chewing the bag*. I send you, Messrs. Editors, with this, some Duchesse, Lawrence and Easter Beurre pears, picked and ripened in October, and kept in my house to this date, for you to *chew*—then let us have your opinion.

Now, this fruit was not put up with the intention of keeping it any length of time, but is from a basket of each variety left from last shipment, to eat; but I found it keeping so well I concluded to let it remain, and to this date have not lost five per cent., and am satisfied that our markets can be well supplied with pears from our own State until December or January. The only trouble is that the fruit being in order about November 1st, in demand, prices good, and *shipper in need of greenbacks*, they have to go.

But to return to my prediction, I will just quote a remark made to me by a fruit commission merchant of your city a few days after I commenced shipping my pears: "You have completely killed the sale of green pears here, and I hope they will never come to life again, for last season the market was completely broken up by being flooded with green fruit." Now, Messrs. Editors, all this talk about pretty fruit, remunerating prices, and keeping them perfect so long, &c., &c., looks beautiful on paper, and may cause some of your readers to commence building *pyramids* rather beyond their reach. I will here remark, and I think very appropriately just at the close of another year, that age and experience are great preceptors, and I have added a little of both since I last wrote you.

My experience with the enemies of the pear during the last season has been anything but pleasant; we have had the blight and the slug to perfection, both of which I have succeeded in conquering so far, the former by cutting out

daily until it ceased, and the latter by sprinkling with whale-oil soap suds, (one pound of soap to four gallons of water.) But not so with my neighbors; some have lost at least half of their trees with blight, and others had all the foliage of their trees eaten up, and their orchards looked as if they had been fired from one end to the other. In all such orchards the growth of the tree was checked, and the fruit almost worthless; in fact, but few if any orchards were exempt from their attack, and but few used anything to destroy them or prevent their attack, and they necessarily must increase very rapidly, and I fear to the utter destruction of most of our orchards. Should such be the case, pear culture will not be overdone by the quantity of fruit raised, but overdone, in fact *burnt up*, by the slug and fire blight.

R. S. EMORY.

Kent Co., Md., December 15, 1879.

[The samples sent showed the success of the plan adopted by our correspondent. They were well ripened and toothsome.—*Eds. A. F.*]

The Winesap Apple.

Messrs. Editors American Farmer :

Having read with interest several articles in the recent numbers of the *Farmer* about the best winter apples for us in Maryland and the South, thought I would add a few lines in favor of our well-tried Winesaps:—We have eight trees planted about twenty years ago on moderately good land. The orchard was planted in potatoes every year for ten years; at the end of that time the trees were beginning to bear a small crop of apples. From those small trees we have had a good family supply of apples *every year* but one, that was 1878. They usually keep till May or the first of June. The rule has been to pick *early* and head up tightly in barrels or boxes after they have passed through the sweating process, say about ten days after picking. Try to pick as near September 20th as you can. They are kept in a cool place. Any out house will do; *have never kept apples in the cellar*. This year the crop was unusually fine, but fear they will soon be all gone. Suppose the hot days in October have been the cause of the rot.

THOS. J. LEA.

Montgomery Co., Md., Dec. 25, 1879.

Pear Notes.

Messrs. Editors American Farmer :

We hardly remember a season when our dwarf pears have done so indifferently as during the past summer. The fruit did not ripen kindly, some varieties not coming to maturity at all, while others ripened four to six weeks earlier than the usual season. After carefully considering the whole matter from every point possible, we have been unable to come to any satisfactory conclusion as to the cause of these vagaries—if we may use the word—in the pear. We would like very much to hear from others on the subject.

It has been said that manuring produces, or tends to produce, disease. In old gardens,

where the soil becomes full of humus, it *is so*; but where orchards are planted out in the way usually done with us, we have not yet seen surface manuring carried to an injurious extent, and our own pears this season have done better where manure was liberally applied than where it was withheld. I am satisfied, however, that the manure was neither the cause nor the prevent of disease. The singular manner in which fire-blight attacks trees would almost lead one to the belief that it is governed by no law; sometimes attacking small limbs, as usually with Beurre Giffard; at others attacking the half of a tree; then again a whole tree is withered as if struck by lightning, while it not infrequently happens that a tree is girdled, as it were, with a band of a few inches in width just above the collar or the surface of the ground. We have found the Mount Vernon suffering especially in the latter way. Have others noticed this peculiarity in that variety? N. F. F.

Small Fruits for Farmers—Mulching against Drought.

Can any one give a valid reason why farmers generally pay so little regard to small fruits? We do not mean their cultivation for marketing purposes, but for the use of their own family. Farmers who keep decent profitable gardens are not the rule. There are many exceptions I will admit, and this abundantly proves that the thing is perfectly feasible. No garden certainly ought to be without strawberries, raspberries, currants, gooseberries, a few dwarf pears, &c.; and when we remember how very little trouble these fruits need to make them bear abundantly, and how small the cost in the first instance, it is certainly matter for surprise that our rural population pays so little regard to their culture. Thorough mulching is just about the best and pretty much all the cultivation these fruits require to produce abundance in quantity and quality, and farmers will hardly complain of scarcity of material necessary for the purpose.

And just here, while speaking of mulching, we would say that after the protracted drouth of this year a good mulch is of more than usual value to young and to newly-planted trees, to evergreens, &c. If heavy rains precede frost, the danger will be somewhat lessened, but should heavy frost come before the ground becomes thoroughly soaked below the roots of the subjects mentioned, a great many will be killed by drouth as much as if it were July. The lesson taught by the season of 1873-4 will not be easily forgotten, but it will be thrown away if we fail to profit by it. N. F. F.

CARE IN THE WINTER MONTHS secures prompt and satisfactory improvement when first returned to grass in the spring, and obviates those risks that attend on the sudden plethora which usually follows, when thin animals, capable of rapid improvement, are turned from a spare and innutritious diet to a rich, succulent and abundant pasturage.

Pleasure Grounds and Greenhouse, &c.—January, 1880.

By W. D. BRACKENRIDGE, Florist and Nurseryman, Govanstown, Baltimore Co., Md.

Pleasure Grounds.

We now resume our remarks from last month on hardy Herbaceous Perennial plants as ornaments for the flower garden.

The first and among the most attractive, and deservedly held in high estimation for the beauty and fragrance of their flowers, are several representatives of the Lily family, and we take the Funkias to begin with. Of these, we are acquainted with from about 8 to 10 species and varieties, all of which, so far as we know, are natives of Japan. *F. alba*, with its large pure white fragrant flowers, borne on stems 12 to 18 inches high, surmounting a patch of broad glossy green leaves, is certainly very beautiful. We find that it delights in a rich deep soil and partially shaded situation. The next, and perhaps a more common plant in our gardens, and not quite so beautiful, is the *F. cœrulea*, and of this, as well as of several other species, there are varieties having leaves striped or margined with white or yellow bands. All the kinds we have seen appear to be perfectly hardy in the Middle States, and by no means difficult to cultivate, and are readily multiplied by divisions of the root-stock.

Near akin to the foregoing is the *Hemerocallis*, or Day Lily. The majority of the kinds produce orange or copper-colored flowers. The kind most common in our gardens is the *H. fulva*, and which in many neglected places has so spread itself as if to indicate that it was to "the manor born."

The *Agapanthus cœrulea* and its white-flowered variety, as well as the *Tritoma Uvaria* and *T. media*, the last vulgarly called the "poker plant," though highly ornamental, but being natives of the Cape of Good Hope, will not stand our winters without protection; but they are just the articles adapted to our Southern States.

Perhaps, at the head of the tribe on which we have been commenting stands the genus *Lilium*, or true Lily, which, in all the species and varieties we have seen, combines a grace of growth, beauty of flower and delicate fragrance, which give them an unrivaled position among herbaceous plants. We can scarcely conceive that there exists any one who would not admire the gorgeous flowers of *L. auratum*, or the delicately-tinted and highly-perfumed varieties of *L. lancifolium*, the original kinds claiming Japan as their native country, while China has furnished us many valuable sorts, and among the best of which is the *L. longiflorum*. All of the kinds named stand our winters and flower well if planted in a deep rich friable loam, observing to mulch the surface with a layer 2 or 3 inches thick of decayed leaves or well-rotted manure. We have found that the best time to transplant the bulbs is during the months of September and October.

The well-known white garden Lily, *Lilium candidum* and *L. bulbiferum*, known as Orange

Lily, are not grown as much as they ought to be, neither do we find that our native species are appreciated much as ornaments of the garden as they are in Europe. Fifty years ago we saw on the "other side of the water" our native *L. superbum*, growing among masses of *Rhododendrons* and *Kalmias*, where it attained the height of 6 to 8 feet, and, when in bloom set off a group of evergreens to perfection. Mr. W. H. Perot, at his country-seat, in Baltimore county, grows the Japan Lilies among his *Rhododendrons*, where they succeed admirably.

To raise Lilies from seeds, these should be sown in some light earth so soon as they are ripe.

Almost everyone who cultivates flowers knows the old-fashioned garden Columbine—*Aquilegia vulgaris*, the color of the flowers in the original kind being blue,*but by being crossed with other kinds many different shades of color have been obtained, and double flowering sorts have made their appearance as well. In addition to these varieties, we have the pretty native scarlet flowering kind *A. canadensis*. But the handsomest of all the native Columbines we have seen, are the long-spurred kinds from the Rocky Mountains,—*A. chrysantha* and *A. coerulea*,—and from these two kinds we have been enabled to raise many hybrids, some of them semi-double, and varying in color from drab to a pale blue. The *A. glandulosa*, from Siberia, is also a very showy sort. All the varieties are perfectly hardy, very ornamental, and multiply readily by seeds or dividing of the plants.

The Iris, or Fleur-de-Lis of the French, are a very numerous and showy tribe of plants, some of them provided with bulbous, but the majority have tuberous roots; all are of easy cultivation, and some of the very fine bulbous-rooted kinds now grown in pots to decorate our greenhouses spring from *I. xiphium* and *I. xiphoides*, with perhaps a dash of *I. persica*; these, with a little care, do well in the open ground.

But the most desirable varieties to produce effect, either when planted in lines or masses, are the hybrids raised by horticulturists in Europe, from *I. Germanica* and *I. Susiana*. These exist in many shades of color from dark blue down through many tints to a rosy-white; and in order to prolong the season of Irisdom, we have only to bring into requisition those splendid hybrids of *I. Kœmpferi* from Japan, whose season of flowering is somewhat later than our native or European sorts. As an incentive to grow the Iris, we remind people that they will thrive in almost any soil that is a little moist, but not retentive of water.

Still farther, as interesting and showy, the Aconitums, or Monkshood tribe, deserve our attention. Although poisonous in their qualities, are very attractive in a mass of mixed plants, but should never be planted near a dwelling where there are children. They are mostly all erect growers, producing flowers of a purple or blue color, frequently interspersed with white markings; all are of easy culture and multiply readily by division of the root.

The Crowfoot or *Ranunculus*, of which we have in our gardens several double varieties,

both white and yellow in color; these, if I may so speak, are relics of olden times, for we mind when a boy having seen them growing in almost every old woman's garden, but this does not make them less desirable now. The dwarf double sorts of *R. Asiaticus*, so numerous in kinds in Europe, are not so much sought after here, owing to our climate being too warm and dry for them. When well grown, they are certainly pretty.

We will continue this list in another No.

Greenhouse.

Cleanliness is said to be akin to godliness. So let it be with every keeper of a greenhouse. All that has a tendency to detract from the enjoyment of viewing a collection of plants kept neat, clean and in a healthy condition should be removed, whether it be insects, decayed leaves and flowers, or weeds and green scum adhering to the pots. All this kind of work should not be done by fits and starts, but there should be a regular system of attending to such work at least once or twice every week; and when potting has to be performed inside of the house, observe that so soon as such work is finished, to have the dirty pots, &c., removed at once, as we have seen such filth remain untouched for weeks after the job was finished. The same diligence should be exercised in keeping the fire stock-hole and pot-shed clean and tidy. We are constrained to make the foregoing remarks from having seen so much filth and confusion in greenhouses that were kept purely for pleasure.

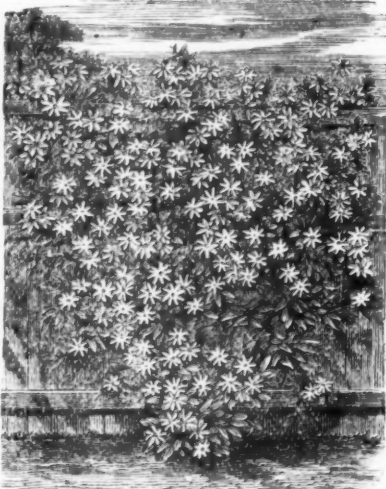
Stevias and *Eupatoriums*, so soon as they have done flowering, should be turned out of the pots, reserving only a few plants to propagate from; this will give room to grow *Geraniums*, *Cinerarias*, *Calceolarias*, and other spring-flowering plants. Roses for blooming in pots should be kept in a warm and light part of the greenhouse, giving them at the roots a watering of liquid manure at least once or twice every week; this, with frequent syringings of water to keep the red spider down, will secure you a good supply of buds; of course the green fly on them will be killed when other plants are fumigated.

The Cactus family is not much sought after at present, and should there happen to be a few kinds, in nine cases out of ten they will be found stowed out of sight in some out-of-the-way corner. Now to get some satisfaction out of them, if they consist of *Mammillaria* or *Echinocactus*, place them in a light place on a shelf near the glass, and do not over-water them. If they are of the *Cereus* or *Epiphyllum* kinds, then they require more heat, shade and moisture. Perhaps the finest of all the *Cereus* kinds is *C. Speciosissimus*; in olden times this was grown in our establishment in Philadelphia by the hundreds, and to see a house filled with plants of it about two feet high, each plant bearing ten to fifteen of its gorgeous blossoms, was a sight worth going 100 miles to see.

Of the *Epiphyllums*, perhaps the finest for ordinary purposes are the varieties of *E. truncatum*, which does best when grafted on *Cereus triangularis* or *Pereskia aculeata*. *E. speciosum* and *Ackermanni* are perhaps as good as can be found, if we except one called *E. Feasti*, raised by John Feast, Sr., of Baltimore, which has

very thick leaves and large brilliant colored flowers. A mixture of cow manure, turfy loam and sand is about the best compost in which to grow these leafy Cacti.

The Clematis.



Vick's Magazine gives, from a photograph sent by a correspondent, the above engraving of a plant of *Clematis azurea grandiflora* when four years old. This family is nearly or entirely hardy and the several kinds are the glory of the flower-garden. For covering arbors, training over verandahs or on posts, nothing can be more effective. *Jackmanii*, one of the English hybrids, is one of the most beautiful and hardy varieties. On our place a tall pillar, formed of an old trunk of a tree, over which a plant of this is trained, is a wonder of beauty during the season of its large purple flowers.

Hortus Hamptonensis.

Coleus.

Our English friends are again sending us quantities of what they style "Hybrid Coleus." Our own opinion is that of all the Coleus introduced since the *C. Verschaffeldii* was discovered are either hybrid or crossbred. I believe it was in 1868 when the English sent out with a great flourish the first of the golden-edged varieties as the results of careful hybridization, but we were never informed what variety they used to get the golden color from, as previous to that time we had no golden colors except *Laciniatum*, from which I never could get a seed. The same season that Coleus Setting Sun, Her Majesty and others, were sent out with such a display of chromo-lithography, I had a batch of seedlings raised from the old Veitchii, (which was claimed to be an original species,) without any attempt or any chance for crossing, many of which were bright red with golden edges, just as good as those we paid so dear for from England. Now

Veitchii was chocolate color with a green edge, and never showed a trace of red or yellow, and the seeds were taken from plants that had no other Coleus near. For some years we had nothing very distinct in Coleus, until two years ago Pictus was sent out as "a new species from the Duke of York Island." Now, this may be a fact, but I am of the opinion that Pictus is the first really hybrid sort we have had. All the older Coleus would, to some extent, reproduce themselves from seed; but, so far as I have observed, Pictus never does, and the wonderful batch of new Coleus we are now getting from England are Pictus seedlings, pure and simple. In a batch of about seventy Pictus seedlings which I now have from seed taken from a solitary plant removed from all danger of crossing, (as all my other Coleus were sheared and not allowed to bloom,) I find hardly two plants alike, and none reproductions of Pictus. Most of them show the purple and carmine shades like Kentish Fire, Fascination, &c.

Pictus I believe to be a cross between *Laciniatus* and one of the old chocolate-colored sorts, and it may have occurred in a state of nature; but before buying those English hybrids (?) at a high price, had we not as well raise them ourselves and not call them hybrids at all. Who has Coleus Laciniatus now? I would like to get it again on account of its dwarf habit.

We are having a delightful winter for work, and he must be a sluggard indeed who does not take advantage of it to get ready for the pushing work of spring.

Vegetables.

I was rather amused at your Virginia correspondent's account in the last No. of the *Farmer*, of experiments with seeds from the Agricultural Department.

The general average of seeds sent out from there is slightly better than the old "Patent Office" stock, but it has been many years since I felt disposed to waste time in experimenting with seeds from the government shop. If Mr. Ivy will get seeds of the Hackensack melon from a first-class New York seedsman he will find that it is a large variety of the nutmeg, and a first-class melon every way. We use a great many melons here, and I find that Hackensack and Cassaba are the best for my use.

In good seasons the Giant Rocca and other Italian Onions can be grown from seed in the South, just as large as the old sorts are raised in the North, and I think they are the "coming" onion for Southern use. Mr. Ivy is right about Canada Victor tomato. I have discarded Trophy and all other three-pounders. They are too large, and burst and rot badly. The Acme is the best tomato I have ever grown, but I never fail to put in some Canada Victors, as I find them less liable to rot in wet weather than any other sorts.

In Peas we prefer for earliest the Philadelphia Extra Early, (which every Philadelphia seedsman tacks his own name to.) McLean's Little Gem, sown at the same time, will come in as the other goes out,—a much more delicious and productive sort. Then McLean's Little Gem (sown two weeks after the first) follow, and the Blue Imperial (sown with the first) follow these. Sub-

sequent sowings of Blue Imperials keep us a regular supply of peas from the last week in May till the first in July, which is as late as peas will do well here. For a "stand by" there is nothing like Blue Imperial. Champion of England is fine, but unproductive and needs sticks, which we do not use.

There is another vegetable which I have never seen grown here by any one but myself, but which is so delicious that I would like to see it grown more. I refer to the Chard or Swiss Silver beet. This beet makes immense leaves, with a silvery white stalk or midrib, which is the part eaten. The leaves are pulled off like Rhubarb, and the leaves stripped from the midrib, which is cooked and served like Asparagus. I think it superior to Sea Kale, which it somewhat resembles. Those who try the Chard will be apt to continue its growth. But don't send to the agricultural department for the seed, as you will be just as likely to get a cow beet.

I grew this fall some of the Mammoth White Chinese Winter Radish. The only trouble with them is that one radish is more than a family requires at a meal. They are as large as large-sized Ruta Bagas, and not at all pithy.

Raspberries.

The Pearl, Fastolf and Antwerp Raspberries were cut down badly last winter; so this winter mine are laid down and tucked in with a little earth. Brandywines are hardy and productive, and the fruit is bright and handsome, but it is hardly worth eating, being so dry and flavorless. Philadelphia is hardy and productive, but fearfully ugly and worthless for the table. I much prefer to grow the tender sorts like Fastolf, Brinkle's Orange, &c., as I think good fruit is worth all the trouble of laying down in winter.

Improving Garden Soils.

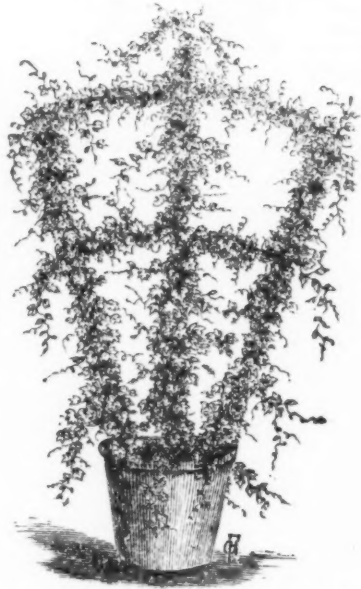
Mr. Watson may be right in regard to plowing under green crops in the garden—a gardener cannot spare his ground for this purpose—but I find that the greatest advantage accrues on our heavy limestone clay from turning under a good coat of vegetable refuse. I have one piece of land in the vegetable garden here which my predecessors told me was worth nothing but for bricks. Last spring I covered it with leaves from the park and all the shearings from a long line of arbor-vitæ hedge. This dressing worked a perfect transformation in the stubborn clay, and it worked as well as any land I had. This fall all our leaves, and there are many hundreds of loads, are stacked up in the vegetable garden in spots where the wind will not spread them, so that I can put them under at any time. I have abundance of manure, but I value the mechanical action of the leaves on our stubborn soil so highly that I expect to use them all hereafter. I think it a waste of time for a gardener to grow green crops for turning under—the process is entirely too slow for his limited area.

December 17, 1879,

W. F. MASSEY.

A bow and ends of white satin ribbon form the finishing touch to the handle of a bouquet intended for the ball-room, the handle itself consisting mainly of wires covered over with white paper, tin-foil or common ribbon.

Pilogyne Suavis.



This is a charming climbing plant, not new, but somewhat rare, which deserves to be more widely known. Messrs. Ellwanger & Barry, to whom we are indebted for the cut, say as soon as it is known it will rank number one as a valuable ornamental plant for covering trellises, pillars and rustic work, indoors and out.

It is a remarkably dense and rapid grower, and is particularly fine as a pillar plant. A pleasing effect may be produced by placing several plants 4 to 5 feet apart in the form of a circle, each plant being furnished with a stake 6 to 8 feet high. When the plants reach the top of the stakes they may be trained to run on a wire from stake to stake.

The vine is killed to the ground by the first frosts of autumn, when it should be cut off and the roots taken up and potted. If placed in a window it will soon start again, making a beautiful decoration. In the spring it may be again cut back and planted out. The flowers of the vine are small, creamy white and fragrant.

Ferneries and Wardian Cases for Farmers' Homes.

Messrs. Editors American Farmer:

In reading the contents of your valuable journal, I notice you have some columns of horticulture by that veteran, Wm. D. Brackenridge, Esq., than whom certainly none know better whereof they write; the Vegetable Garden by one who is evidently a most practical cultivator; then you have some pages of interest to lady readers, God bless them! the wives and daughters who make the farmers' homes pleasant after days of toil and anxiety.

I often wonder why more of them do not make their homes more attractive in winter, when everything outside is bare and often gloomy, by adorning them with flowers. To



A FERNERY.

my mind, nothing looks more cheering than to see plants blooming in the windows of our houses, and surely there is nothing easier than to have such, for our farm-houses generally get a good portion of sun at most of their windows, and may have such a pleasant heat from a fire of wood, sending a genial warmth through the room, which plants so much like, instead of the poisonous gases from the coal furnaces of the modern houses of the city, which are so destructive to plant life, but in spite of which drawbacks the refined taste of the city ladies will have flowers in the windows; and can it be possible that the farmers' wives and daughters are not as refined in their tastes as those of the merchant and tradesman? I don't believe it. Neither do you, Mr. Editor. Now, what would be suitable to adorn any parlor or sitting-room, and be a constant source of pleasure to the owner, is a fernery, or Wardian case, which is nothing more or less than a parlor greenhouse, and need not take up much room nor cost much money, and requiring very little care. It can be made in any form desirable, and all that is necessary is to have the sides and top of glass, and the top is best to be made to open on hinges, so that when there is too much moisture it can be opened a little to let in fresh air, which plants (like people) so much need.

Now for the plants for a fernery: Nearly all the *Adiantums*, or Maidenhair Ferns, are desirable for such a purpose, and they are so diversified in their appearance that a collection of them is most interesting, and the eye never tires of beholding them. There are many of the ferns not suitable for a fernery, such as the *Gymnogrammas*, but any of the following kinds will do well in a fernery: *Adiantum Capillus Veneris*, low-growing, for the outer edge; *A. Chilense*, *A. Concinnum*, *A. Cuneatum*, *A. Curvatum*, *A. Excisum Multifidum*, *A. Farleyense*, the finest of all the *Adiantums*; *A. Gracillimum*, a perfect gem; *A. Amabilis*, *A. Trapeziforme*; and for the centre of the group a nice plant of *Lomaria Gibba*. There are many others of the fern tribe that could be most successfully employed, of great diversity of form and color, such as many of the *Aspleniums*, *Davallias*, *Nephrodiums*, and others, not forgetting the *Pteris* family, many of which are most beautiful and indispensable for a fern-case, a few of which I will mention, and among the most beautiful *Pteris Argyrata*, the mid-rib a pure white, with light-green margin, a good grower and very ornamental; *Pteris Cretica Alba Lineata*, another white-striped variety, suitable for a fernery, giving a lively appearance

by the striking contrast it makes among others of a darker green foliage; *Pteris Serrulata*, one of the hardiest of the fern tribe, with its spider-like fronds—indeed, I have heard persons call it the spider fern; *Pteris Serrulata Cristata*, like the former, except the ends of the fronds have a curious crest, not unlike parsley leaves.

But what need to multiply names when I have mentioned so many that will do well in a fernery, not forgetting to plant among them some of the *Lycopodiums* or *Selaginellas* to cover the soil, many of which grow most luxuriantly in a fernery?

Now, I presume some of my readers will ask the very natural question: In what kind of soil shall I plant the ferns? And this is certainly an important point in securing success. Ferns will adapt themselves to almost any kind of soil under certain conditions, but the soil I would recommend for a fernery would be one-third good loam, one-third well-rotted leaf mould, (plenty of which every farmer can find in his woods,) and one-third very coarse sand. Let it all be thoroughly mixed together, not being particular to make it too fine. In this plant your ferns, and after planting give it sufficient water until you are sure every part of the soil is thoroughly wet; put on your glass cover, and then give it no water for three months or more, unless you find the evaporation in a heated room has been too great, which can be ascertained by feeling the surface of the soil. Here let me say that to make a beautiful fernery it is not absolutely necessary that you should have to go to a greenhouse to obtain ferns for such a purpose, for in very many places in Maryland vast quantities of beautiful ferns are to be found in the woods and along the streams and swamps, quite enough diversified in appearance to make a beautiful fernery. I think I have said enough on the preparation of a fernery, and must say something about a wardian case, as mentioned when I started out, and must be brief, as I fear I may trespass upon your valuable space with my rambling remarks.

Now, what is a Wardian case? Simply a miniature greenhouse. Nothing more or less, except in this: In a greenhouse the plants are exposed to all the dust and dirt that may be found in such a place; in the wardian case the plants can be protected from all such by closing the case, only opening it to give it air, the same as the gardener does the greenhouse. Now, there is nothing better for such a case that I know of than an ordinary glass show-case; only make it higher in the back than the front. Now, to make such a case cheaply, get a carpenter to make a box the width of your window, six or eight inches deep in front, and from 2 feet to 3 feet at the back; line bottom and sides with zinc to the height of three or four inches, or more, as suits the taste or desire for expense of the owner. The former is quite sufficient, which is to keep all moisture from the carpets or floor when watering the plants. Then cover the same with sash made (if a large window) in two sections, hinged to the front side, for convenience in raising to give air to the case. Put your low-growing plant in the front row and the larger in the rear, and as your plants grow be careful to turn

them at least once a week, so that they may be uniform and not grown too one-sided. Thus you can have a miniature greenhouse in your parlors and have your plants protected from the gases so destructive to plant life. Now I ask what ornament could any one have more beautiful than such a case filled with beautiful plants, which would be a constant source of pleasure and amusement for a lady to tend, and all grow in such an artificial way? I know it would give more pleasure to grow our own flowers for planting out in the flower-beds in the spring than to have to go to a commercial grower and buy your plants for that purpose, particularly when many live so far from such an establishment. There are many other suggestions that I had intended to make to the ladies about ornamenting their homes with flowers, but as this paper has grown to such a length I must forbear, hoping, if this meets any favor, I may give another paper on the subject.

AN OLD FOGY.

Vegetable Garden.

Little can be done in the garden at present, but much may be done in the matter of laying plans for the coming season. Errors in last year's management should be recalled, so that we may guard against their repetition in future.

How to keep up a steady supply of sweet corn for the table, without occupying more land with the crop than is necessary, is still one of my problems. From last year's experience I should judge that small plantings of *Egyptian* or *Stowell's Evergreen*, or of both together, made every ten days from May 1st to July 10th, with two plantings of *Early Adams*—one about the 25th of April and another ten days later, to begin the season with,—would bring us out about right.

I have resolved to be done with raising celery in beds. I never liked the looks of those formidable earthworks, and think we can do better without them. I would plant the bulk of the crop in rows 2½ feet apart, or even less. These I would mulch if I could find anything suitable to mulch with, and I am satisfied that would be my best celery. A few rows would be planted further apart and blanched for early use.

In mapping out the garden for the coming year, it will help to a proper arrangement of the various crops to bear some such classification as the following in mind:

First, we have permanent crops—those that occupy the ground two or more years—such as *Rhubarb*, *Asparagus* and the various small fruits. These should be kept as near together as practicable to be out of the way of the regular plowing.

Second, we have crops that are usually planted early, and that occupy the ground most of the season. *Parsnips*, *Salsify* and *Carrots* may be mentioned, and also *Lima Beans*, which, although not planted early, require so much time in preparing the ground and setting the poles as to preclude the possibility of getting any other crop off the ground the same season.

Third, we have crops that take just one-half the season to mature, such as *early Cabbage*, *Cauliflower*, *Beets*, &c., to be followed by *Celery*,

Leeks, *Pickles* and *Herbs*, which occupy the ground until frost.

Fourth, we have crops that do not divide the growing season so evenly, but overlap somewhat, the one set being as it were the complement of the other. Thus Fall-sown articles, *Spinach*, *Greens*, and so forth, together with early sowing of *Peas*, *Lettuce*, *Spinach* and *Radishes*, will mature in May or early in June, giving the longer season to plantings of *Corn*, *Tomatoes*, *late Cabbage*, &c., as well as to a variety of crops that occupy the ground during warm weather only; whilst on the other hand, crops of early *Potatoes*, *Tomatoes*, *Corn*, &c., will not mature or be used up until considerably past midsummer, giving the shorter season to *Turnips*, *Winter Radishes*, *Spinach*, *Greens*, *Onions*, and the like.

No intelligent work can be had in the garden unless we take the above and various other considerations into account, such as the quantity of manure best adapted to each class of plants, the proper distance to plant, the most reliable sorts, &c., &c. Simple as the whole has become, there is yet room for considerable method and management, and a little forethought at this season will tell at the proper time.

The getting ready of stakes, poles and pea-brush, and attending to the manure pile, is about all we can do in the way of out-door work in the garden.

JOHN WATSON.

The Maryland State Grange.

The seventh annual session of this body was held in Baltimore, December 9, 10 and 11. The attendance of members nearly up to the average of the last few years, and many more visitors than usual present, whilst the fact cannot be gainsaid that the order has of late lost numbers in Maryland as elsewhere; but those who represented at this session the local granges of the State seemed as much inspired as ever before with the opportunities open to the grange, and the advantages already secured by its operations. As a whole, the body compared favorably with any previous State grange, and the men and women present as representatives of the farming community were evidently equal in intelligence, education and appearance to any similar number which might be chosen from other classes of our citizens. Good feeling prevailed, and a spirit of mutual forbearance and fraternal toleration which has not always been so manifest. Measures which had not the hearty and unanimous support of the fraternity or which were opposed by a respectable numerical minority were not pushed by the majority; a disposition was evinced not to undertake too much, and, especially in the efforts to secure legislation, rather to seek the education of public opinion than by direct appeal to the law-making power to accomplish what is easily to be gained if public sentiment really favors.

Home Department.

[We invite from our lady readers such contributions to this department as will enlarge its attractions and usefulness. We aim less to give it a literary character than to make it the repository of practical and seasonable experiences and suggestions, and to include whatever touches the home interests of all who make up the farm household.]

The Home of My Heart.

Not here in the populous town,
In the playhouse or mart,
Not here in the ways gray and brown,
But afar on the green swelling down,
Is the home of my heart.

There the hillside slopes down to a dell
Whence a streamlet has start!
There are woods and sweet grass on the swell,
And the south winds and west know it well;
'Tis the home of my heart.

There's a cottage o'ershadowed by leaves
Growing fairer than art,
Where, under the low-sloping eaves,
No false hand the swallow bereaves;
'Tis the home of my heart.

And there as you gaze down the lea,
Where the trees stand apart,
Over grassland and woodland may be
You will catch the faint gleam of the sea
From the home of my heart.

And there in the rapturous spring,
When the morning rays dart
O'er the plain, and the morning birds sing,
You may see the most beautiful thing
In the home of my heart.

For there at the casement above,
Where the rose bushes part,
Will blush the fair face of my love;
Ah, yes! it is this that will prove
'Tis the home of my heart.

Neighborliness.

It would seem as if the historic fame for hospitality and its kindred virtues, which are the just inheritance of all true Marylanders, rendered the discussion of them in these columns superfluous. Various causes have, however, conspired to bring about radical changes in our domestic economy, through which the customs of former days have been interrupted, and none have suffered more than those which come under the head of our subject in the ordinary acceptance of the term.

The deprivation of household servants trained to the customs, not only of the house where they belonged, but of the community of which it formed a part, seemed for a time to excuse all effort toward social entertainment; and where, as in some localities it has happened, that by the time people had adapted themselves to the new condition in regard to help, the neighborhood itself had so completely changed as to leave old settlers isolated with reference to their old friends, and a somewhat unpardonable indisposition toward cultivating new ones. That there remains the promptings of kindly natures no one who has had sickness or trouble to call

them out will deny; but farther than that, the new-comers have too often failed to experience the neighborly kindness the established character of Marylanders led them to hope for. I am very well aware that I am on debatable ground, and that much reasoning, which they think good, may be urged in defence of the dignified reserve many Marylanders have maintained toward those who have come from other portions of the country to make their homes here. The one they chiefly give expression to is, their inability to dispense such hospitalities as they were wont to do, and they have not yet learned to adopt those of a more simple character and which might be more in keeping with their resources.

It is because I frequently heard the boasted hospitality of Marylanders challenged in the course of journeyings North and West, by persons whose friends, having become settlers among us, had with seeming justice complained of the neglect they experienced, that I venture to suggest a fair consideration of the duties we owe socially to each other, and some readjustment of the accustomed expressions of good fellowship, which will render them practicable under existing circumstances.

If apology for so doing should be deemed necessary, and over thirty years residence within her borders be insufficient to establish my right to be jealous for Maryland's reputation on my own account, that, together with their father's birthright, may be supposed to justify it for my children's sake.

When we bear in mind the fact that those people who have made their homes all around us, are as much strangers to each other as they are to ourselves, we must, to some extent, appreciate their desolate position. Delicacy forbids their making advances toward the only members of the community of whose character or position they can have any means of informing themselves, nor have they any opportunity to present their own credentials, which, in many cases, would at once establish their claim to the highest consideration.

Churches, societies, business communications and schools aid in destroying the barriers which interfere with the proper knowledge of each other; and also, in good time, the young people intermarry. But this tardy acknowledgment, which circumstances might seem to have forced, is not satisfactory, nor is it calculated to promote the public good, nor the individual benefits to be derived from mingling with other minds and other people, in a friendly and unreserved manner.

The most direct and appreciable expression of good will toward strangers is doubtless to invite them to our homes and our tables. Upon the manner of so doing, however, much depends. It is in view of this fact probably, that our people are so much disposed to honor their friends or guests with tables groaning under a superabundance. Manifestly such demonstrations require a full larder and much actual labor.

[Abundance is always and everywhere to be desired. Superabundance is not, and it answers no good purpose, and caters to an appetite for ostentatious display.]

[This extravagant custom once established in a neighborhood, there can be no departure from it without risk of reputation or offence. The only alternative is not to entertain at all.]

We need not travel far beyond our borders to find that in this respect our people are decidedly exceptional.

One rarely fails to find *plenty* on respectable tables everywhere, and those most pleasing to the appetite and to the eye are where painstaking has expended itself in daintiness of preparation rather than in the profusion of it.

It is often the case that some member of a family excels in the preparation of one particular dish. Where such is the case, it serves a two-fold purpose: it makes a ready excuse for gathering a few friends or neighbors unceremoniously, and very simple accompaniments will answer the purposes of true hospitality. I am confident that our new neighbors would enjoy some such free and easy style of entertainment far more than the heavy state occasions which have been heretofore thought essential to good treatment; nor would our old friends be long in discovering the convenience and pleasure of the new departure.

I do not wish to be understood as advocating an indiscriminate gathering of those whom chance has brought near us, whether congenial or otherwise, into the circle of our home or friends; while neighborliness, in its scripture sense, is incumbent upon us under almost any circumstances, we are, nevertheless, at liberty to make choice of those we desire to affiliate with. Justice, however, requires that we should make reasonable efforts to ascertain whether strangers in our midst have not personal qualifications which give them the right to be acknowledged as one of us, either by education, social position, or any other ground upon which we select our friends and associates. If they possess these claims, and we, for some whim of our own, ignore it, we do them a great wrong; and there may also be others watching our course, who will, therefore, infer that we have knowledge of something to the disadvantage of the stranger, and govern their own course accordingly. There are certain civilities *due* to a stranger everywhere, especially from those belonging to the same condition of life.

Sooner or later, everybody finds their level if they remain in one place long enough; but life is not sufficiently long to admit of our dilly-dallying over things which constitute so large a portion of our real happiness or the happiness of others, where it may, in some measure, depend upon ourselves, and no amount of regret can compensate either party, when we find, too late, that we have, of our own accord, deprived ourselves and our neighbors of pleasures or kindly offices such as only true neighborliness admit of.

CERES.

True Hospitality.

When shall we comprehend that all true hospitality consists in perfect honesty, in freedom, ease, and subordination of things to persons? Who would not prefer the plainest dinner or the humblest entertainment, with bright, interested,

sympathetic host or hostess, to the most elaborate table or preparations for which he or she had already been exhausted? As the host, so the company; he must be spontaneous, intelligent, tactful, or the company droops and is disappointed. To invite those we do not like or want is unkind to them and injurious to ourselves. To do what we cannot afford is pretentious, and therefore vulgar. To rank our viands above our personality is a sorry compliment to our guests and a sorrier one to ourselves. Material entertainment can be purchased anywhere; that which should accompany it—sincerity, cheerfulness, esteem, benevolence, correspondence of feeling—must be gained by the right of desert, and without these, hospitality, make it as we may, is a misnomer.

Grandmother's Christmas Story;

OR,

The Romance of a Little Tin Tea-kettle.

BY A. H. T.

It is a cold night. The snow is deep, and is still falling, softly, steadily, silently; filling in the window-sills, nestling up under the eaves, and choking the rain-pipes; gathering on every twig and spray of vine or tree; preparing us a silent and beautiful picture for our Christmas awakening.

Little we mind the wind and storm, though, the gay girls and I, for I, too, grow young again through them, as we gather around the open fire in the dear old room. Their gay laughter recalls old days, and their sunny hair and bright eyes make me dream, yes, dream; but I dream with tears gathering in my eyes, which are no longer bright; though I feel a smile creep all over my heart, warming and softening it into a holy peacefulness.

How the fire burns and cracks, as its light dances on Allie's sunny hair; how dim and shadowy the hazel eyes have grown, as silence falls upon us for one brief moment, and we hear the wind sigh restfully around the house; Jeanette has loosened her raven locks, which creep and curl, and nestle around her soft warm neck; her eyes flash in the weird light of the fire, and they recall the romance of my life, the hero of my heart.

"Grandma," and two bright hazel eyes are turned wistfully to mine, "it is Christmas eve, just the time for the romance of the little tea-kettle which you prize so highly, always keeping it in that tiny glass case upon the parlor shelf."

"Yes, do, grandma! I have heard the dear story many times, but never yet have I tired of it," chimes in my gay Jeanette.

"Nor I of telling it, my wee ones!" We nestle closer about the fire, I in my great arm-chair, with two bright thoughtful faces at my knee, and I begin:

"It was Christmas time, and grandpa, that is, my father, you must remember children, was up to his eyes in work, (as old Silina used to say,) for he was not only a druggist, but, as I said before, it was Christmas eve, which to a man in my day was a great time. There were six of us children, three girls and three boys. Then there

was one more, who, to all of us, was as dear as a brother, and that was father's clerk; his name was William. There, too, was the baby, whom I forgot to count with the rest, he was so small; that was your uncle Alex, children. Such a baby as he was too! how he would clap his little hands and crow as we would dance first one bright toy and then another before his sweet eyes!

We had begged father, my dears, to let Will come in and help us dress the tree.

"Yes, do let him come!" said dear mother, "he will enjoy it, poor dear."

"Very well," said father, "he shall come." So when William came in for supper, which he took after father always, as but one could leave the shop at a time, we all received him with open arms, and tongues, too, for that matter; for we nearly deafened him with our jokes and laughter. How gay we were! Mother and father never stopped our happy tongues; for father was as fond of a noise himself sometimes. But to go on with my story:

We first must get the tree, so off we set—over our shoe-tops in snow—to market. How bright and gay everything was; how the men cheered and slapped their arms against their sides to keep themselves warm; how bright the women's faces were, some with cheeks as rosy as the apples on their stalls!

"Oh!" said I, suddenly finding a prize at one of the toy stands, "see this cute little tin tea-kettle! Wouldn't it be nice?" But I found I had been talking to myself, for on looking up I saw that I was alone.

"Give me this," I said in great hurry to the woman behind the stand. "A dime did you say?" I was somewhat frightened at finding myself alone in the crowded market-place at that time of night, although I knew my way perfectly from there, having run back and forth many times on errands for dear mother; but quickly a cheery voice at my side made my heart beat joyously again—a voice I knew only too well; I looked up to meet William's brown eyes, which had not quite lost their look of trouble, aroused when they discovered me missing from the party.

We soon joined the rest, the boys shouldering the tree, and we girls laughing and talking over our purchases, my little adventure, the fun in prospect, and many other pleasant things; for when hearts are as light as ours were it doesn't take long to find something bright to say.

I was quite young, (seventeen,) but being the oldest of a large family, felt myself much older, and that a great deal depended upon me to set a fair example to my younger brothers and sisters. After dressing the tree and arranging our gifts, we settled ourselves for prayers; then each and all said good-night, and went off to bed and pleasant dreams. Then it was that I remembered the little "tin tea-kettle" which I had entirely forgotten among the many other things which claimed my attention during the evening.

"Oh, mother, what shall I do with it?" I exclaimed, "it is now too late to put it upon the tree!"

"Why," said mother, as she hastened off to bed, "hang it upon William's door-knob." How

little she knew what would come of that hurried suggestion of her's, as she gave me my good-night kiss!

When all was still, I stole out into the entry in my bare feet, and with nothing on save my clean white gown, which trailed after me in the darkness. My heart beat high; it made me fear it would awaken William, as I stood there in the cold and silence tying my little gift upon his door-knob. Then back I ran quickly into my own room, and jumped into bed; but not for sleep, for you must know, my little ones, how my old heart beats even now as I think of it. Allie and Jean, I loved William even then, yes, I loved him with all my glad girlish heart.

I loved him so gladly, passionately, recklessly, that every time I thought of him the glad warm rush of blood from my heart brought the color to my cheeks, and a word from him would bring a smile to my lips when no other's could.

He said nothing to me the next morning of my gift. Could he have failed to see it? I wondered. I grew dejected, and ran up to his room door softly, when I found time from the rest, to ascertain; but no, he must have taken it, for it was no longer there. The day went heavily by to me, and at last it was Christmas night once more; the day which we had looked forward to for so long a time had come and gone, and we began another year again.

It was late upon this Christmas night, William and I were together alone in the parlor talking; first one of the family and then another had left us, until we found ourselves alone in the sweet-scented room. There was no light but that of the fire, which we were watching slowly dying, and the light of the clear night and snow outside. We turned from the fire, stood gazing out into the clear cold night, and the beautiful stars smiled calmly down upon us, as if to bless us. Oh, how my heart did beat, faster, still faster, then suddenly it grew very still, for William was speaking to me. * * *

There was silence, too, in the old room, and grandma seems to have forgotten the story she is telling; the wind has died down and everything is very still, only the falling of a few dead ashes in the grate, and three women's hearts beating a tender song. What are the thoughts of each? It is hard to tell! But grandma is clearing her throat as she begins:

Oh, I can feel it all now again, my children, and again she pauses. Well, lasses, he didn't say much, but when mother called me from the sitting-room I had given my heart into William's keeping.

It was about two years after all this that William and I were married; one day he and I were looking over some love treasures, when I came upon the little tin tea-kettle, together with his mother's picture, his bible and the first letter I ever wrote him. I took it then and kept it for him, until one day, baby, (your father, my big girls,) thought he would like it for a play-thing, so seeing it upon my dressing-table helped himself to it.

"But, of course, you missed it, dear grandma!" "Why, yes, of course I did, and how worried William was, too, when he found baby had taken it and then lost it. We looked high and low for

it, but could find it nowhere. One day William was having the cellar cleaned under the store, (we lived just back and over his own little shop then,) he was down there helping himself; in one corner, among a lot of dirt, he saw something bright catch the light; he walked over to it, and touched it with his foot.

"Oh yes, grandma!" the girls chime in before I can finish, "of course we know! it must be the little kettle!"

"Yes, you are right, it was it; and oh, you should have seen my good man's face as he came to me, holding in both his hands his lost treasure found again. That Christmas we had it gilded and placed in a tiny glass case.

Then, soon after, the war broke out, and my good man was called like the rest. One morning he came in from the shop troubled and sad; he drew me to him, and taking the face which was very dear and beautiful to him between his two hands, gazed long and tenderly into my eyes, (the wind sighs restlessly without,) then he told me, my children, that we must part for a little while—only a little while; he would come back again. But nothing would comfort me. Ah! me, what a heart-ache it was; I had been such a happy wife! Well, he went from me, and he would have the little kettle fixed up for him as a lamp; it travelled through many a long march and hot battle next to the heart of my dear old man; for I like to think he, too, is grown old up in God's beautiful heaven.

"Why, grandma?" and my old hands are both taken, one by each of the girls; for two or three bright drops shine on the hair in the fire-light. Grandma soon begins again in a tremulous voice; "A telegram comes to me; they are bringing my boy home wounded. Oh, children may these beautiful young eyes *never* see the agony I saw and felt.

It was Christmas eve when they brought him home, and sweet June when my boy was at rest. Let me recall it: he had seemed somewhat better that day, although I knew from the first I must lose him. It was just at sunset; I remember the clouds now, how there had been a storm that afternoon, and the great banks of cloud lay before us, purple and gold and crimson. I raised the window for some fresh air. How sweet it was. The soft twitter of the happy birds as they sank contentedly to rest, knowing all was well for the night; the sweet breath of the rose which crept in at the window; the spicy odor of the earth after the rain;—all, all, come back to me again.

We talked of our lives together, Willie and I, and of the little tin tea-kettle.

"Yes, that did the work, little mother," he said; he always called me that. Ah! I can never tell the rest; what is there more to tell? Surely you would not have me tell of a broken-hearted woman; for, my girls, it is Christmas eve; away and fill the socks. They both give me a tender good-night and leave me. I go to the window; it is a lovely night; the storm has passed away; 18—is clad in snowy death-robos. The clouds part, and the moon sails gayly on in a sea of blue. It is a sight for poets. I am no poet, only a mother. But I stand there late.

Good Domesticities.

We have observed that persons much addicted to complaining of servants and to dismissing them for real or imaginary offences, seldom find their own condition improved by the change. On the part of employers the habit of fault-finding too often but aggravates the evils of neglect or disobedience on the part of domestics, and those will seldom be pleased who show no disposition to be pleased. It is human nature to be seldom amiable when unhappy. There are but few ungenerous, obdurate persons, who will not be more moved and swayed by a pleasant smile and ten words of kindness and encouragement, than by a long lecture on the duty of servants, or whole volleys of censure. It is ever bad policy, as it is unjust, to have a quick eye to faults and to be blind to good actions. And in families, as in States, those govern best who govern little, and rather by invisible influences and the contrivances and circumlocutions of discretion and charity, than by unmasked authority and force. In fine, in the domestic circle, affection must come within the circle of a deep and generous regard. Who can estimate the value of a long-tried and faithful servant?

Suggestions for the Household.

For a cheap and tasteful window curtain in a common-sized room, buy six yards of the finest and softest unbleached cotton, at nine or ten cents a yard; eight yards of Smyrna, Torchon or Cluny lace insertion, at 15 to 20 cents a yard, and the same quantity of lace edging, three inches in width. If the lace is too white to match the unbleached cotton, dip it into a little weak coffee, and let it soak until it matches exactly. Cut the cotton into three yards length, and sew on the lace insertion and edging up and down one edge and across the bottom. If you desire a little wider edge, cut some strips of cotton lengthwise to fit the edge and bottom, double up a false hem, and sew it between the edge and insertion. Lay the top of the curtain in even side plaits, and tack the curtain on to a thin slat of wood the length of the window cornice. In the absence of gilt or hard wood-cornices, lace insertion or edging can be sewed on a piece of cotton three or four inches wide and plaited in large box plaits, single or double as preferred. A ribbon to match the color of the decorations of the room can be plaited across the top. Bunting makes a pretty substitute for the cotton.

WHEN the carpet is well beaten and freed from dust, nail it tightly down and scrub it with suds made of one pint of bullock's gall mixed in about four gallons of hot water and one pint of soft soap. Take a soft brush with long bristles, and turn a little of the soap-suds into a shallow basin, dip in the brush and scrub well, and as the water becomes soiled throw it away and take fresh suds. The gall can be procured from any butcher, by giving him a bottle and asking him to fill it, at a cost of a few cents. It will brighten faded colors greatly. Ten cents' worth of carbonate of ammonia, dissolved in a gallon of water and rubbed over the carpet, will

also prove of much value in restoring faded carpets.

To clean the inside of tea-kettles and pots, boil for an hour in the kettle or pot a tablespoonful of carbonate of ammonia, dissolved in three pints of hot water. It will remove at once all the deposits made by boiling water.—*Land and Home.*

Domestic Recipes.

RICH GINGER BREAD.—1 cup of butter; 1 cup of sugar; 1 cup of milk; 1 cup of molasses; 3 cups of flour; 3 eggs; 1 large spoonful of ginger; 2 of cinnamon; half a nutmeg grated and 2 teaspoonsful of baking powder—I prefer the Sterling—put in the last thing and sifted with the flour.

Cream together your butter and sugar; add the yolks of eggs, well beaten; then the molasses and spice and whites, beaten to a stiff froth, alternately with the flour. Add, if you like, a cupful of stemmed raisins well floured. Bake in a slow oven in bread tins. It will keep a long while good, in either earthen or tin, and makes a delicious lunch with raspberry jam and a glass of rich milk.

CRULLERS.—1 egg; 2 tablespoonsful of fine sugar, creamed with 1 tablespoonful of butter; stir in flour enough to make a batter just stiff enough to handle, and half teaspoonful of baking powder; season with nutmeg. Roll out about two inches thick and cut with a wine-glass. Make a depression in the center, into which lay a preserved cherry or strawberry or some nice marmalade, only a very little; press the dough round it, roll in the hands so as to form into a ball, drop into boiling lard deep enough to well cover them; fry a rich brown, and when done take them out with a skimmer and turn them over in powdered sugar and a little cinnamon. They are very rich.

CINNAMON CAKES.—2 lbs. of brown sugar, best; 2 lbs. of flour; 1 lb. of butter; 3 tablespoonsful of freshly-ground cinnamon and 2 tablespoonsful of salt; 3 eggs; 1 wine-glass of rose water; 1 teaspoonful of baking powder. Mix all well together as for best cake, roll very thin, cut and bake.

CHRISTMAS PUDDING.—1 lb. finely grated bread crumbs; 1 lb. flour; 2 lbs. stoned raisins; 2 lbs. best currants, (washed and dried;) 2 lbs. beef-suet minced fine; 1 lb. sugar; $\frac{1}{2}$ lb. citrou sliced thin; 1 nutmeg; $\frac{1}{2}$ oz. mixed spices, ground; grated rind of two lemons; 16 eggs; 4 wine-glasses of brandy. Mix all thoroughly together, except brandy, spices and eggs. Beat the eggs as lightly as possible separately, put the spice to steep in the brandy and add these last, kneading well with the hand. Now divide into four portions, tie each closely in a stout linen pudding-cloth and drop into boiling water; each should boil six hours. When finished, hang them in a cool, dry, airy place, and when you wish to use one drop it into a pot of boiling water and let it boil for fifteen minutes, or steam

it an hour if you prefer. Pour over when ready to serve a teacup of best Jamaica spirits, touch with a match and carry to table blazing, with a wreath of holly around the platter. The blue blazes are suggestive of future punishment if you eat too much.

LEMON SAUCE.—Cream well together two tablespoonsful of butter, eight tablespoonsful of sugar, two eggs and four tablesconsful of cream. When well mixed add the juice and rind of a lemon. Put the basin containing this over a vessel of boiling water and stir until it is smooth, glassy and the consistency of rich cream.

FRUIT CAKE.—1 lb. of fine white sugar; 1 lb. butter; 1 lb. flour; 12 eggs; 4 lbs. seeded raisins; 4 lbs. currants, washed and dried; 1 lb. citron sliced; $\frac{1}{2}$ lb. of candied orange-peel; $1\frac{1}{2}$ oz. of ground cinnamon; 2 grated nutmegs; $\frac{1}{2}$ oz. of ground cloves; 1 tumbler of brandy and wine mixed. Put all the fruit together and flour thoroughly with some of that weighed for the cake. Put the spices to steep in the liquor. Cream together the butter and sugar, and beat the eggs separately as light as possible. Then mix as for other cake, putting in the fruit last. Bake in a moderate oven, and, if possible, do not stir the pans after once in. Try with a straw after it has been in an hour, and, if it seems done, just prop the oven door open and let it stay there until morning, covered with paper and the fire dying down. This applies, of course, only to those who, like myself, prefer to bake cake when the ordinary cooking is all out of the way. I consider after tea the best time for fruit cake.

STUFFING FOR CHRISTMAS TURKEY.—Crumb up finely, but do not grate, a pint of stale bread; cut into it a quarter of a pound of butter, season well with salt and pepper, and add a teacupful of stemmed raisins, moisten with just a few tablespoonsful of boiling water; do not make it wet, and stuff the craw only as full as you can; sew it up and when ready to send to table draw the stitches carefully, so the dressing will not tumble out. If you have any left lay it lightly inside the turkey, but do not fill the carcass. This is, of course, only for roast turkey. E. T. G.

Useful Recipes.

PRESERVING HARNESS.—The first point to be observed is to keep the leather soft and pliable. This can be done only by keeping it well charged with oil and grease. Water is a destroyer of these, but mud and the saline moisture from the animal are even more destructive. Mud, in drying, absorbs the grease and opens the pores of the leather, making it a ready prey to water, while the salty character of the perspiration from the animal injures the leather, stitching and mountings. It therefore follows that to preserve a harness the straps should be washed and oiled whenever it has been moistened by sweat or soiled by mud. To do this effectually the straps should be all unbuckled and detached, then washed with a little water and crown soap, then coated with a mixture of neatsfoot oil and tallow and be allowed to remain undisturbed until the water has dried out; then thoroughly rubbed

with a woolen rag. The rubbing is important, as it, in addition to removing the surplus oil and grease, tends to close the pores and gives a finish to the leather. In hanging harnesses care should be taken to allow all straps to hang their full length; bridles, pads, gig saddles and collars should be hung upon forms of the shape of each. Light is essential in the care of leather, and when the harness closet is dark the door should be left open at least half of the time during each day. All closets should be ventilated, and when possible they should be well lighted. To clean plated mountings use a chamois with a little tripoli or rotten stone; but they should be scoured as little as possible.—*Harness Journal*.

STAINING FLOORS.—Put 1 ounce Vandyke brown in oil, 3 ounces pearl ash and 2 drachms dragon's blood into an earthenware pan or large pitcher; pour on the mixture 1 quart of boiling water, and stir with a piece of wood. The stain may be used hot or cold. The boards should be smoothed with a plane and sand-papered; fill up the cracks with plaster of Paris, and use the brush, not across the boards, but lengthwise, and coat only a small space at a time. When quite dry, size the floor with glue-size, made by boiling glue in water and brushing it into the boards hot. When this is dry, sand-paper them smooth and varnish with brown, hard varnish.

TO RENDER LEATHER WATERPROOF.—1. Melt together 2 ounces Burgundy pitch, 2 ounces soft wax, 2 ounces turpentine and 1 pint raw linseed oil. Lay on with a brush while warm.

2. Melt 3 ounces lard and add 1 ounce powdered resin. This mixture remains soft at ordinary temperatures, and is an excellent application for leather.

CEMENT FOR KEROSENE OIL LAMPS.—The cement commonly used for fastening the tops on kerosene lamps is plaster of Paris, which is porous and quickly penetrated by the kerosene. Another cement which has not this defect is made with three parts of resin, one of caustic soda and five of water. This composition is mixed with half its weight of plaster of Paris. It sets firmly in about three-quarters of an hour, and is said to have great adhesive power, not permeable to kerosene, a low conductor of heat and but superficially attacked by water.

Hygiene.

Clean Beds.

It must be a false idea of neatness which demands that beds should be made soon after being vacated. Let it be remembered that more than three-fifths of the solids and liquids taken into the stomach, should pass off through the pores of the skin, seven millions in number, and that this escape is the most rapid during the night, while warm in bed. At least one-half of this waste of putrid matter (from twenty to thirty ounces during the night) must become more or less tangled in the bedding, of course soiling it, and that part of this may become re-absorbed by the skin if it is allowed to come in contact with it on the next night, as it must, if the bedding is not exposed for a few hours to the air and light. We may well imitate the Dutch example

of placing such bedding on two chairs near the window, in the sunlight; or in the window, that the best purifier known—the light of the sun—may dissipate their impurities, or neutralize them. At least three hours, on the average, is as short exposure as is compatible with neatness. It is also desirable that the air should pass through open doors and windows, and that as much sunlight be admitted as possible to the room in which about one-third of the time is spent. In addition to these measures it is well to have the attic windows wholly or partly open, and the door leading to it, so that a free current may pass through all the rooms, up the stairs, and out into the outer world, to become purified by vegetation, &c., before being again respired.

Clothes thus aired and sunned will not demand more than half the usual washing, though they can scarcely be washed too often.

Another means of promoting personal cleanliness is by an absolute change of all clothing, morning and night, wearing nothing by night that is worn by day; and *vice versa*. Such clothes as are hung to sun by day and dry by night, and such only, are fit to be worn by those who have a reasonable regard for personal cleanliness. And I may remark that when such clothes are removed for the change, it is of the utmost importance to the health that the skin should be subjected to a reasonable friction—as by a flesh-brush, a crash, a coarse flannel, or the hand, as a means of cleanliness, and of improved circulation.—*R. J. Hanford*.

Not Enough Sleep.

As a people, we do not get enough sleep; we do not get enough rest; we will not take time for such things; hence our nervousness, our instability, our hasty temper, and premature giving out of the stamina of life. Half of us are old at three-score, the very time a man ought to be in his mental, moral and physical prime. Half of our wives, especially in the farming districts, die long before their time, because they do not get rest and sleep proportioned to their labor. Nine times out of ten it would be better for all parties if the farmer should get up and light the fires and prepare breakfast for his wife, she coming directly from her toilet to the breakfast table, because it almost always happens that she has to remain up to set things right, long after her husband has gone to bed, when really he has nothing to do after supper but go to bed. This is a monstrously cruel imposition on wives and mothers.—*Hall's Journal of Health*.

A Paper for Young People.

Every family that desires to provide for its young people wholesome and instructive reading matter should send for specimen copies of the *Youth's Companion*. It is the brightest and best of papers. Its columns give more than two hundred stories yearly by the most noted and gifted authors, besides one thousand articles on topics of interest, anecdotes, sketches of travel, poems, puzzles, incidents humorous and pathetic. It comes every week, and is emphatically a paper for the whole family.

The American Farmer.

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BALTIMORE, JANUARY 1, 1880.

The American Farmer for 1880.

We again present to our readers and friends the claims of our journal upon their assistance and support for 1880. As we have promised already, there will be no deterioration in the character or change in the objects of the *Farmer* for the year just beginning—rather will it be more alive to the great interests of agriculture and awake to every opportunity of promoting them. And not only will its general features be unchanged, but every effort be made to improve and adapt them to every want of the class for whom it caters. The aid we have so long received from competent correspondents will be continued through the present year, and others will be added to the list. We deem it unnecessary to enter into any elaborate details as to our future. The *American Farmer* is too well known to require any puffing as to its merits, and the character of its conductors has stood the test for too many years, in every department of life, to need any assurance at this late day, that no consideration other than the public good will ever be permitted to warp its pages to mere selfish and personal ends, even if these should in any way interfere with its duty to the great class for whose interests it has ever been devoted.

Believing that we have the ability and the facilities for rendering our old journal, in the future, what it has ever enjoyed in the past, the

reliable and honest guide to the farmers of that portion of the country through which it mainly circulates, we once more appeal to our tried friends to use their personal efforts in its behalf, to secure an increase in its circulation in their respective neighborhoods, conscious as we are that the more extensively it is thus distributed the greater will be the benefit to the landholders generally thereof, as well as to the individual subscribers, but few of whom could fail, by a little personal effort, to raise a club in their immediate vicinity.

We take the occasion, in conclusion, to tender our unfeigned thanks to our friends for their uniform kindness and solid support in the past, and wish them all health and happiness and prosperity in the future.

Our terms, as before announced, will be found at the head of this page.

Legislation for the Agricultural Interests.

Besides the efforts which will be vigorously pressed during the coming session of the General Assembly for the erection of an elevator to afford storage for Maryland grain, and for changes in the Tobacco Inspection laws, demanded so long and with so good reason, the farmers ought to have no difficulty, if awake to their own interests and willing to impress their views with sufficient energy upon their representatives, in securing the establishment of an Agricultural Experiment Station, similar in its operations to those which have done and are doing efficient service towards agricultural enlightenment and progress in other States and countries. An inquiry into the condition and work of the Agricultural College might be instituted with advantage and a remedy applied, provided influences are guarded against which have heretofore proved potent as against the individual judgment of legislators. Protection should be provided against the spread of pleuro-pneumonia, a disease long existing in serious proportions in our State, but of which our State officials seem totally ignorant, and to stay the increase of which there is no power with authority to act during the recess of the Legislature.

Death of D. W. Nail, of Frederick Co.

We regret to announce the death, on December 24th, in the 86th year of his age, of this old personal friend of ours, who had been, besides, for more than an ordinary life-time, a steadfast

subscriber to the *American Farmer*. Our acquaintance with Mr. Naill began some 55 years ago, when a friendship was formed which lasted to the day of his death. He was a subscriber, we believe, to every journal which we have published during that time (and they were many) and has long made it a regular custom to forward each year a club for the *Farmer*. Mr. Naill was one of the old-style Maryland farmers, honorable and just in all his relations of life, and respected by all who knew him. He had several times represented Frederick county in the Legislature of Maryland, having served in both branches.

"The American Agricultural Association."

An organization bearing this title was formed at the meeting held in New York, December 10, there being about one hundred persons present, most of them from territory contiguous to New York, but some from a distance, a portion of whom were in attendance on the International Dairy Show, which was being held at the same time. A number of papers were read by scientific and practical gentlemen present, and a constitution was adopted and officers elected under it. John Merryman was elected president; J. H. Reall, secretary, with a vice-president from each State, a Board of Directors of twenty-one, and an Executive Committee of seven members.

Mr. Merryman is a citizen of this State, a dealer in fertilizers which are made in New York for the firm of which he is the head, and shipped to several of the cotton States. He has been president of the Maryland Agricultural Society for the past two or three years, it having under his administration languished more than during its previous unsuccessful career, and being virtually controlled now by the Jockey Club, as was set forth by the late Executive Committee in their card published last January in our pages.

We said in our last there was, in our opinion, no occasion for this organization; and we will now add we think little probability of its being a success.

The *Country Gentleman* intimates the election of the secretary, who is an employee in a salt house in New York, demonstrates that one of the leading objects for the movement has been successfully achieved, and the *Prairie Farmer* confesses to "lack of faith in the plan and methods employed by this new venture" for the "upholding of agriculture and the interests closely allied to it."

HENRY O. DEVRIES.

As one who occupies so prominent a position in the regards of the farmers of Maryland, our readers will, we think, be pleased to see the portrait, which we give in this number, of the new Master of the Maryland State Grange.

Mr. Devries is a native of Carroll county, in this State, but has long been a citizen of Howard. He was born on a farm, reared on a farm, and, with the exception of a few years during which he was engaged in mercantile business, has lived on a farm during his entire life. As a farmer, he is thorough-going, progressive, and devoted to his calling. As a man, he enjoys the respect and confidence of all who know him; as a neighbor, he is warm-hearted and sincere.

Mr. Devries is no politician, and has never held office except when called upon by his fellow-citizens to serve one term as judge of the Orphans' Court of his county. He was, besides, a member of the convention which framed the present Constitution of Maryland, and was conspicuous there for his efforts on behalf of a recognition of the rights of the agricultural community which he represented.

Alive to every opportunity offering to advance the cause of agriculture, upon the introduction into this State of the Order of Patrons of Husbandry, he was among the first to ally himself with it; and his faith never faltering as to the opportunity for good which it offers, his works have conspicuously shown forth his belief in its power and opportunities to relieve the farmers from many of the burdens and inequalities which oppress them as a class.

Upon the establishment by the Maryland State Grange of a business house in Baltimore, Mr. Devries was selected by its executive committee to take charge of it, and he has continued in that capacity ever since, doing arduous work faithfully, perseveringly and patiently, to the satisfaction of the patrons of the establishment, and in a manner to win the esteem and respect of the business class of the city, with whom he was necessarily brought in contact, by his frank manners, his single-heartedness and his devotion to the interests he represented.

At the recent meeting of the State Grange he was elected to the Master's chair, and the entire organization will second with unanimity the choice there made, as one of peculiar fitness. W. M. Devries has endeared himself to the Patrons all over the State, and no man stands or could stand higher than he in their

estimation. Without much experience in the position of presiding officer, he is yet firm, prompt and courteous. As a public speaker he is fervid, markedly earnest and effective, seldom failing to carry his audience with him by the palpable honesty and intensity of his own convictions. We know the agriculturists of Maryland will join us in wishing him a prosperous administration of the difficult and delicate position he is called to assume.

The Farmers' Convention of Montgomery County

Will be held this year on January 12th, at 130 P. M., in the Lyceum at Sandy Spring. The programme includes reports on various interesting subjects and discussions on the following questions:

1. How deep should sod land be plowed for corn and when?
2. Why do we not keep more sheep; and what is the best breed with which to improve our common sheep?
3. What is the right size of farm on which it pays the manager better to superintend than to labor; and what makes a successful farm?
4. Does it pay to raise pork at 5 cents per pound, and is it profitable to keep hogs over winter?
5. Is a farmers' hotel and market in Washington a necessity?
6. Has the movement in favor of a decrease of taxation and a judicious expenditure of county funds, originated in this convention last year, been a success?

The proceedings of the Maryland State Grange occupy a considerable space in this number. The subjects treated on, however, are not only of concern to the members of the Order, but embrace matters of general interest to the farmers of the State, more especially in relation to those questions which will largely engage the attention of the legislature at its session which commences this month. It will be seen, besides, that several pages are added to our usual number.

Pleuro-Pneumonia.

Mr. Thos. J. Edge, Secretary of the State Board of Agriculture of Pennsylvania, writes us under date of December 29:

"In my fight against pleuro-pneumonia, by a special commission from Gov. Hoyt, I find our worst drawback to be the importation of infected stock from your city. Last week we killed 10 head in one herd, and this week will kill 5 more in the same herd,—all from an infected cow traced to Baltimore."

Maryland Granges.

BALTIMORE CO. GRANGE, No. 13, will hold a special meeting in the hall of Garrison Forest Grange, Pikesville, on Tuesday, January 6th, at 10.30 A. M.

GUNPOWDER, No. 127, Baltimore Co., has elected the following officers: Master, Ben. F. Taylor; Overseer, Richard Vincent, Jr.; Lecturer, Dr. W. T. Allender; Chaplain, Wm. H. Merritt; Steward, Henry Milkie; Assistant Steward, H. L. Cator; Secretary, Fredk. Gambrill; Treasurer, Walter Gambrill; Gate-Keeper, Geo. Rader; Ceres, Mrs. B. F. Taylor; Pomona, Mrs. R. Vincent, Jr.; Flora, Mrs. T. Pitcher; Lady Assistant Steward, Mrs. Wm. Gambrill.

GARRISON FOREST, No. 153, Baltimore Co., has elected officers for 1880 as follows: Master, Geo. H. Elder; Overseer, Chas. B. Rogers; Lecturer, Dr. J. Councilman; Chaplain, Bro. Parsons; Steward, Thos. Craddock; Assistant Steward, Richard F. Maynard; Secretary, Frank Saunderson; Treasurer, Wm. F. Johnson; Gate-Keeper, Arthur Chenowith; Ceres, Mrs. C. Lyon Rogers; Pomona, Mrs. H. L. Naylor; Flora, Miss Heiner; Lady Assistant Steward, Miss Urith Cockey. They will be installed at a public meeting at the hall at Pikesville, Tuesday, January 6th.

WYE, No. 99, Queen Anne's Co., held its annual election of officers, which resulted as follows: Master, John Dodd; Overseer, Wm. B. Dulin; Lecturer, F. A. Willis; Steward, J. W. Wood; Assistant Steward, W. T. Higgins; Chaplain, J. K. Skinner; Treasurer, J. H. Dodd; Secretary, E. B. Vandye; Ceres, Mrs. John Dodd; Pomona, Mrs. Jno. K. Skinner; Flora, Miss Frances A. Wood; Stewardess, Mrs. W. T. Higgins.

SPANIARD'S NECK, No. 67, Queen Anne's Co., has elected officers for 1880 as follows: Master, Jas. T. Earle; Overseer, Jas. Tilghman; Lecturer, Richard Hollyday; Steward, Wm. H. Cecil; Assistant Steward, Chas. F. Rich; Treasurer, John M. Collins; Chaplain, Wm. H. Warren; Secretary, W. L. Lowe; Gate Keeper, D. L. Knight; Ceres, Mrs. Frank A. Emory; Flora, Mrs. J. W. Watson; Pomona, Mrs. Addison Emory; Lady Assistant Steward, Miss Annie Tilghman.

PIONEER, No. 38, Wicomico Co. Officers for 1880: Master, A. E. Acworth; Overseer, L. H. Cooper; Lecturer, Dr. W. C. Marsters; Stewart, J. Watson Wilson; Assistant Steward, Wm. H. Bradley; Chaplain, Wm. F. Wilson; Treasurer, T. A. Bounds; Secretary, J. Armstrong; Gate-Keeper, Luther Kennerly; Ceres, Mrs. Lydia Bennett; Pomona, Mrs. E. J. Armstrong; Flora, Miss Sarah Bradley; Lady Assistant, Miss C. E. Acworth.

HOMBLAND, No. 170, Baltimore Co., has chosen the following for the ensuing year: Master, Jas. Pentland; Overseer, Isaac Moss; Lecturer, Wm. D. Breckenridge; Steward, Peter Ruhl; Assistant Steward, Samuel J. Buckman; Chaplain, Mrs. L. Dawson; Treasurer, John J. Anderson; Secretary, Alex. Brodie; Gate Keeper, Lewis Dawson; Ceres, Miss Belle Brackenridge; Pomona, Mrs. James Pentland; Flora, Miss M. A. Hamilton; Lady Assistant Steward, Miss Annie Dawson.

Statistics of Agriculture for 1879.

The U. S. Department of Agriculture has prepared a statement of the amount of the several great staples of the country raised during the past year, the values given being those to the producers. The total increase as compared with the preceding year is nearly four hundred and sixteen millions of dollars:

CROPS.	1878.	
	Product.	Value.
Wheat, bushels.....	480,122,400	\$336,346,494
Corn, bushels.....	1,388,218,750	441,153,405
Oats, bushels.....	413,578,560	101,945,830
Rye, bushels.....	35,842,790	13,592,826
Barley, bushels.....	43,345,630	24,488,315
Buckwheat, bushels.....	12,346,820	6,454,130
Cotton, bales.....	5,216,933	193,854,641
Tobacco, pounds.....	322,546,700	21,137,426
Hay, tons.....	36,608,936	285,543,752
Potatoes, bushels.....	134,136,650	73,059,135
Total.....		\$1,468,570,806

CROPS.	1879.	
	Product.	Value.
Wheat, bushels.....	448,755,000	\$499,008,000
Corn, bushels.....	1,544,899,000	580,259,000
Oats, bushels.....	364,253,000	120,355,000
Rye, bushels.....	33,646,500	15,505,000
Barley, bushels.....	40,184,300	23,625,300
Buckwheat, bushels.....	13,145,650	7,860,450
Cotton, bales.....	5,920,377	281,000,000
Tobacco, pounds.....	394,059,759	21,545,591
Hay, tons.....	35,648,000	325,551,280
Potatoes, bushels.....	181,300,000	78,971,000
Total.....		\$1,904,480,659

Contents of January No.

Maryland—Her Capabilities and Advantages, by A. B. Davis.....	1
Food and the Philosophy of Animal Nutrition, by Wm. Holman.....	3
On the Application of Peruvian Guano, by Henry Stockbridge.....	5
Cost of Fencing, by T. W.....	6
Our French Letter, by F. C.....	7
Maryland State Grange, Proceedings of.....	8, 14
Preserving Corn Fodder by Ensilage.....	14
On the Management of Sheep, by Edward C. Legg.....	15
Merino Sheep, by S. K. Crosby.....	16
Sanitary Management of Swine.....	16
Cut Straw for Horses—Castration, by D. Lemay, V. S.....	16
Keep Teats Dry.....	16
Percheron Horse Nogenant (cut).....	17
Smithfield Fat-Cattle Show.....	17
Sale of Jerseys.....	17
The Poultry Yard—Diseases of Fowls.....	18
The Bantam Chickens.....	18
The Light Brahmas (cut).....	10
Butter-Making, by Geo. L. Stabler.....	20
Prof. Arnold on Churning.....	20
The International Dairy Fair.....	21

Co-operation Among Milk Dairymen.....	21
Supplying Pure Milk.....	21
Centrifugal Cream-Separator.....	22
National Dairy-Cattle Club.....	22
Dairymen's Meetings, &c.....	23
To Manage Kicking Cows.....	23
Reducing Charges for Weighing Hay.....	23
Farm Work for January.....	24
Orchard and Fruit Garden.....	25
Advertising Live Stock.....	25
Ripening Pears, by R. S. Emory.....	26
The Winter Apple, by Thos. J. Lea.....	26
Pear Notes, by N. F. F.....	26
Small Fruits—Mulching, by N. F. F.....	27
Pleasure Grounds and Greenhouses, by W. D. Brackenridge.....	27
The Clematis (cut).....	29
Coleus—Vegetables, by W. F. Massey.....	29
Bouquet Handle.....	30
Pilogyne Luavlis (cut).....	30
Ferneries and Wardian Cases (cut).....	30
Vegetable Garden, by John Watson.....	32
The Md. State Grange, Notice of.....	32
The Dish-Cloth Gourd (cut).....	33
Home Department—Invitation to Ladies.....	33
The Home of My Heart—Poetry.....	33
Neighborliness, by Ceres.....	33
True Hospitality.....	34
Grandmother's Christmas Story.....	34
Good Domestic.....	36
Suggestions for the Household.....	36
Domestic Recipes, by E. T. G.....	37
Useful Recipes.....	37
Hygiene—Clean Beds.....	38
Not Enough Sleep.....	38
Domestic Recipes.....	38
Editorial Notices.....	39
Legislation for Agricultural Interests.....	39
Death of D. W. Nail.....	40
The American Agricultural Association.....	40
Henry O. Devries.....	40
Farmers' Convention of Montgomery Co.....	41
Pleuro-Pneumonia.....	41
Maryland Granges.....	41
Agricultural Statistics.....	42

Baltimore Markets—December 31.

Breadstuffs.—Flour.—Market steady and prices firm. We quote: Howard Street Super \$5.00@5.50; do. do. Extra \$5.75@6.50; do. do. Family \$5.90@7.50; Western Super \$5.00@5.50; do. Extra \$5.75@6.50; do. Family \$6.30@7.50; do. City Mills Super \$5.50@5.50; do. do. Extra \$5.75@6.50; do. do. Rio brands Extra \$7.50@7.75; Spring Wheat Family \$8.50@7; Minnesota patent, \$7.75@8.50; Patapoco Family \$8.25; do. Extra \$8.00; Chesapeake Extra \$7.50; Orange Grove do. \$7.65; Fine \$4.25@4.50; Rye Flour \$5.50@5.75; Corn Meal, City Mills, 7 bri. \$5.30; do. do. City Mills, 7 100 lbs. \$1.25; do. do. Western do. do. \$1.20; Western Corn Chop \$1.10@1.15.

Wheat.—Southern quiet, but prices well maintained. Western active and firm. We quote: Southern Fultz \$1.40@1.45; do. long-berry \$1.50@1.55; Western No. 3 red spot \$1.52; do. do. do. January \$1.53; do. do. do. February \$1.57; do. do. do. March \$1.61.

Corn.—We quote: Southern White, new 65; do. yellow, new 59; Western steamer, spot 56; do. mixed spot, old, 58; do. do. do. new 58; do. do. January 58; do. do. do. February 59; do. do. do. March 60; do. do. 60 cents.

OATS.—Receipts very light and the market quiet, but about steady as to prices. We quote: Western mixed and stained 45@46; do. bright and mixed 46@47; Southern 45@47; Penna. 46@48.

EYE.—We quote at 100 cents for good lots.
SEEDS.—For Clover the market is very quiet indeed, but prices are nominally unchanged, and we quote fair to good at 8½¢@9¢ cts., and prime at 9¢@9½¢ cts. ♀ lb.

MILL FEED.—We quote City at \$18 for middlings, \$18@19 for brownstuff, and country lots at \$16.50@17 ♀ ton, with the market dull generally. No Western on the market.

HAY AND STRAW.—Hay continues quiet and only barely steady, but Straw is firm. We quote: Choice Cecil County Timothy \$19.00@20.00; Fair to Prime Maryland and Penna. Timothy \$17.00@18; Mixed Hay \$16.00@17.00; Clover do. \$15.00; Wheat Straw \$11.00@13.00; Oat do. \$14.00@15.00; Rye do. \$20.00.

Provisions.—Market dull and heavy. We quote: Bulk Shoulders, packed, 5½¢; do. L. C. Sides 7½¢; do. C. R. Sides 7½¢; Bacon Shoulders 5½¢; do. C. R. Sides 8½¢; do. Hams, sugar-cured, 10½¢@11¢; do. Shoulders 6¢; do. Breasts 8¢; Lard, Refined, tierces, 8½¢; do. tubs 9½¢; Mess Pork, new, ♀ bbl., \$13.75.

Dressed Hogs.—Have advanced sharply, and we now quote them at \$6@6.35 ♀ 100 lbs., with the receipts light and demand active.

Butter.—We quote: New York State, choice selections, 30¢@31¢; do. do. dairies 27¢@28¢; Western Creamery, choice, 30¢@31¢; do. tubs, choice fresh, 24¢@25¢; do. do. good to prime, 18¢@21¢; Western Rolls, prime to choice, 22¢@23¢; do. do. fair to good, 18¢@20¢; Glades—selections, 18¢@21¢; do. dairies 16¢@18¢; sea by receipts 20¢@22¢.

Cheese.—Eastern choice, full cream, 18¢@19¢; do. good to prime, 12½¢@13¢; Western choice 12½¢@13¢; do. good to prime 11½¢@12½¢; do. skims 9¢@11¢.

Eggs.—Fresh we still quote at 32 cts. for Western; 24 cts. for nearby, and pickled at 16¢@17 cts. ♀ dozen, but the market is dull.

Domestic Dried Fruits.—Market dull, but we quote as follows, viz: Apples, quarters, 5¢@7 cts.; do. sliced, 6¢@10 cts.; Peaches, unpeeled, 6¢@9 cts.; do. peeled, common to fair, 5¢@10 cts.; prime to fancy, 12¢@15 cts.; Blackberries, 9¢@9½ cts.; Whorleberries, 11¢@13 cts.; Raspberries, 25¢@26 cts.; and pitted Cherries, 17½¢@18 cts. ♀ lb.

Rice.—Stock here light and the market dull, with Carolina nominally 6½¢@7½ cts. for good to prime.

Cotton.—The market is firm for spots, though weak and lower for futures. We note sales here since our last of 150 bales mixed grades at 12 cts., but we quote middling firm at 12½¢@13 cts., with the latter figure generally asked.

Produce.—Prices are as follows for the articles named below, viz: Apples, New York State, ♀ bbl., \$3.50@3.75; Beans, New York medium, ♀ bus., \$1.65@1.70; Peas, black-eyed, ♀ bus., .95 cts.; Peas, Western green, ♀ bus., \$2.25@2.50; Potatoes, Early Rose, ♀ bus., 50¢@55¢; do. Peerless do. 40¢@45¢; do. Sweet, new, ♀ bbl., \$3.50@3.75; Onions, Western, ♀ bbl., \$3.25@3.50; Beanswax, ♀ lb., 22¢@23 cts.; Ginseng, ♀ lb., \$1.61.10; Seneca Root, ♀ lb., 45¢@47 cts.; Virginia Snake, ♀ lb., 20¢@25 cts.; Wool—unwashed, ♀ lb., 34¢@36 cts.; do. tubwashed, ♀ lb., 45¢@50 cts.; Hides—dry country, ♀ lb., 11¢@15 cts.; Sheep's Pelts, each, 50 cts. @ \$1; Feathers, ♀ lb., 30¢@50 cts.

Tobacco.—We quote:—Maryland, inferior and frosted, \$1.50@2; do. sound common, \$2.50@3; do. good do. \$3.50@3; do. middling \$6@8; do. good to fine red, \$8.50@10; do. fancy, \$11@15; do. upper country, \$4@20; do. ground leaves, new, \$4@8; Virginia, common and good lugs, \$3@5.50; do. common to medium leaf, \$6@8; do. fair to good leaf, \$9@10; do. selections, \$12@16, and do. stems, common to fine, \$1.50@2.

Live Stock.—**Beef Cattle.**—Very best on sale this week 5½¢@5½ cts.; that generally rated first quality 4½¢@5½ cts.; Medium or good fair quality 3½¢@4 cts.; Ordinary thin Steers, Oxen and Cows 3½¢@3 cts. Extreme range of prices 3½¢@5½ cts. Most of the sales were from 4@5 cts. **Swine.**—The receipts are quite light—far below the numbers last week, and not half as many as one year ago. Under the influence of the very limited number of offerings, prices have made a large advance, and trade is active in consequence; nearly, if not quite all, the offerings having been disposed of. Prices range from 5½¢@7 cts., most sales being made at 6½¢@6½. The quality generally is inferior to that of last week's offerings, few dealers reporting their stock quite as good as it was then. **Sheep and Lambs.**—Sheep at 4@5½ cts., and Lambs at 4½¢@5½, with fair prospects for good stock.

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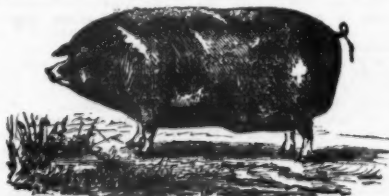
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